

UNIVERSITY OF LIVERPOOL

ANNALS  
OF  
ARCHAEOLOGY  
AND  
ANTHROPOLOGY

ISSUED BY THE  
INSTITUTE OF ARCHAEOLOGY

EDITED BY  
J. P. DROOP  
AND  
T. E. PEET

VOL. XV Nos. 1—2  
MCMXXVIII

LIVERPOOL  
THE UNIVERSITY PRESS  
LONDON  
HODDER & STOUGHTON LTD.

## CONTENTS

	PAGE
Report on the Excavations on the Site of the Roman Fortress, at the Deanery Field, Chester (No. 2). ROBERT NEWSTEAD, F.R.S. (With Plates I-XIII) . . . . .	3
Trial Excavations at Lancaster. J. P. DROOP and R. NEW- STEAD, F.R.S. (With Plate XIV) . . . . .	33
Apollonius ὁ εἰδογράφος. M. M. GILLIES . . . . .	41
Excavations at West Derby Castle, Liverpool. J. P. DROOP, M.A., and F. C. LARKIN, F.R.C.S. Eng. (With Plates XV-XXIV) . . . . .	47
Book Reviews . . . . .	56

# REPORT ON THE EXCAVATIONS ON THE SITE OF THE ROMAN FORTRESS, AT THE DEANERY FIELD, CHESTER

(No. 2)

By ROBERT NEWSTEAD, F.R.S.

WITH PLATES I-XIII

THE first report dealing with the excavations on this site was published in these *Annals* (Vol. XI, pp. 59-86) in the year 1924. It dealt exclusively with the plot occupying a central position on the S. side of the field (Pl. I, 1923-4). The obvious course to have taken subsequently was to have explored the ground immediately northward, following the lines of the buildings which the excavations had already revealed. But this was not within practical politics, as the field thereabouts was used as a playground, and there was also a cricket-pitch near by. Permission was given, however, to extend our search immediately westwards in the SW. corner of the field (Pl. I, 1924-6). Two sides of this plot had to be fenced off to keep out the grazing stock. We began the exploration of this plot early in January 1924, digging, with the assistance of one labourer, on Saturdays almost without a break until February 1926. Many extra days, however, were put in during the summer months, but always single handed, so that the work progressed rather slowly ; all the more so because of the relatively great depth (6-9 ft.) to which the trenches had to be carried. Some filling-in had to be done as the work progressed, but a big task remained and we did not close down until the month of April.

But for the constant assistance of Mrs. Paget and the Misses E. and M. Paige Cox, who raked over the excavated material as it was thrown from the trenches, the actual digging would have taken much longer. That the site proved so rich in small finds was due, moreover, to the thorough way in which almost every scrap of soil was examined by these ladies.



## THE BUILDINGS

The main architectural structures discovered on this site consisted of sections of two blocks of narrow buildings (Pl. II) running N. and S. Fortunately these remains gave us a clue as to their internal arrangements, so that it seems quite safe in describing them as portions of two barrack-blocks (*hemistrigia*), each block being divided transversely into two-roomed hutments. We find parallels for such buildings elsewhere within the Roman provinces ; more especially so in the fortresses of Novaesium (*Bonn. Jahr.*, Heft CXI-CXII), Caerleon (*Arch. Camb.*, Vol. LXXX, p. 380), Lambaesis (Cagnat, *Les deux Camps*), and in part also at the small fort at Housesteads. In the first two the blocks or rows of huts were arranged in pairs (*strigae*), each being divided sub-centrally so that each hut consisted of two rooms of unequal proportions, the smaller or front room facing the verandah, and also the road or lane which passed between the *hemistrigia*. Our find in the Deanery Field was a clear exemplification of what was found in these places. But we were fortunate in discovering details regarding the internal arrangements which seem to have been altogether lacking on other sites.

The footings or foundations of our walls were massive, and, with one exception, were composed almost entirely of irregular bits of sandstone sparsely set in and evenly coursed with a good layer of mortar (Pl. III, Figs. 1, 2). The only departure from this method was found in a short section at the S. end of the outer retaining wall (E. side) of block A. At that point the first course of the footings consisted of a layer of cobbles set in hard mortar (not clay, as is almost invariably the case elsewhere in Britain). Over the cobbles was a layer of broken sandstone 2 feet 6 inches thick, laid sloping towards the N. These were also evenly coursed with a good bed of mortar ; but none was used to hold the broken rock together between the cobbles and the surface layer. Sand was used as a substitute. A fair-sized fragment of a small Samian dish (Drag. 18) was found embedded in the mortar at the top of the footings. Its presence is a useful piece of evidence for dating the structure.

The depth of the footings varied from 4 feet to a few inches, and in width from 3 feet to 2 feet. For the most part they rested upon a bed of sand or sand mixed with soft rock, etc., placed immediately over the solid rock. All the very shallow footings occurred in block A, where the rock came very near the surface.



The footings of the wall dividing the longer axis of the building in block B were, in one place, somewhat inaccurately set out for the superstructure, and they were nearly twice the thickness of the wall in block A. The walls had for the most part been quarried away, but portions consisting of two or three courses had been left in some places, and at the S. end of block B five courses were left standing. These showed a slight offset on both sides.

Two pairs of openings or doorways were clearly indicated in block A, and one pair also in block B. These entrances were, in all cases, placed opposite each other, and in both blocks were facing the verandah and road. These double huts were therefore in plan rather like a row of capital E's, but with the lower arm of each extended to meet the upright of the next, representing the back wall, while the spaces between the two upper arms and the upright of the next stand for the openings of the doorways.

In one instance (room 3A, block A) the socketed stone in which the pivot of the door had worked was left *in situ* embedded in the cement floor. The maximum depth of the cup or pivot-hole was 2 inches, its diameter 2.5 inches.

Opposite the entrance to rooms 3 and 4 in block A was a row of roughly-dressed blocks of sandstone. For convenience one may call them thresholds. The row in front of room 3 did not extend to the full width of the opening, and there was a space, 3 inches wide, between it and the face of the wall. The surfaces of the central ones were worn down to a depth of 2 inches, so that they were level with the cement floor in the doorway. The threshold to room 4 consisted of a row of five blocks of sandstone but this row extended beyond the opening on both sides. There was also a space between it and the outer face of the large stone slab, which latter completely filled the doorway. The cavities between the thresholds and the walls were puzzling, and their use is not at all clear. The soil with which they were filled was searched for traces of timber with the idea that a narrow sill might have been placed in them, but none was discoverable. That these thresholds were intended to hold something in place seemed evident. And it appears possible that the outer openings to the huts were fitted with portable doors or shutters which dropped into the cavities between the thresholds and walls and were fastened above with latches or the like.

## FLOORS AND HEARTHES. BLOCK A

ROOM No. 1. The NE. portion only was preserved. In this the upper floor was of cement (*Opus signinum*), but of poor quality and worn away to a thin layer. Below it was a deep layer of sand. The inscribed marble tablet (Pl. V, Fig. 2) to the genius of the standard-bearers was found in the NE. corner, lying in a mixed deposit immediately over the cement floors.

ROOM No. 1A. The floor to this was formed out of the solid rock. It had a fairly even surface and showed signs of long usage.

ROOM No. 2. There were two definite floors to this room: the upper one of cement, the lower of sand. The latter was capped with a thin layer of charcoal. The western side of the upper floor had been worn through in places and was patched; two fragments of a small Samian cup (Form 27) and three bits of wall plaster were found in the patchings. A coin of Vespasian was found at the SE. angle of the room, close up to the footings, and well covered by the cement floor.

ROOM No. 2A. A narrow strip only of this was explored. On the western side of the dividing wall was a hearth formed of three stone slabs, but they were imperfect, having been partly intersected by a rather massive mediaeval wall. The hearth-stones and the three courses of masonry of the wall at the back of the hearth were discoloured by the action of fire.

The upper floor of this room appeared to be of well-beaten sand. On its surface close up to the dividing wall was a coin of Antoninus Pius (Cohen, 473).

ROOM No. 3. Floors similar to those in room 2. The upper cement floor, though much worn, showed no signs of repair. In the bed of rubble below the cement was one piece of mountain limestone bearing the cast of a shell of *Productus giganteus*. The mortarium and the small beaker (Pl. XIII, Figs. 1, 2) came from the lower floor.

ROOM No. 3A. Here the hearth was of construction similar to that in the hut next door. Some rather unusual finds came from the back of this hearth: a legionary stamp (Text, Fig. 5), half a horseshoe, and an iron fish-hook. With these objects were some fragments of amphorae, and one bit of Samian, Form 27.



## FLOORS AND HEARTHES—BLOCK B

The floors in this block, with one exception (room 5) were of beaten sand. In all cases they exhibited two well-marked levels.

The lower floors varied slightly in thickness, but were almost invariably carried to within an inch or so of the top of the well-coursed footings (Pl. III, Fig. 2). Their surfaces, especially those surrounding the hearths of the inner rooms, were capped with a thin layer of charcoal. But apart from this blackened skin the sand was very clean, and appeared to have been in use for a comparatively short period only. The datable objects found in the lower floors seemed to synchronise, more or less, with those found in the upper floors.

The second or upper floors were generally well stratified. But the sand was usually of a much more solid nature, in some cases stiffened with a little clay, always soiled, and capped near the hearths with charcoal. Here and there in some of the rooms the floors were patched with broken tiles, etc. Many small pockets of refuse were found in these floors, and occasionally also in the floors below. Indeed it seemed to have been a not uncommon practice with the legionaries to bury broken vessels, meat bones, etc., in these places. Much to our joy be it said, for our choicest finds came from these seemingly convenient hiding-places.

Hearths were found in five of the inner rooms, all of them placed against the central dividing wall. They exhibited a somewhat remarkable difference both in form and technique; and on the whole were in a very good state of preservation.

ROOM No. 1. The eastern side only of this seemed to have survived. The floors were of sand, but no relics were found in them.

ROOM No. 1A. The upper floor on the E. side of this room was patched with bits of roofers and small bricks. Of the latter there were 47 examples, the average dimensions of which were  $4.2 \times 2.5 \times 1$  inch. The edges of many of these were discoloured by the action of fire, but there was no evidence of a hearth near by. The leaden sheath of a shoemaker's last (Pl. XI, Fig. 3) came from the upper floor of this room, together with the bobbin-like object (Pl. XI, Fig. 6) bits of late Flavian pottery, etc.

The lower floor had nothing in it of interest save a lump of cherty flint, clearly a 'traveller' belonging to the local drift.

ROOM No. 2. A coin of Nero (I Æ) came from the surface of the lower sand floor on the E. side of the room; and one of Vespasian was found in



a pocket of refuse towards the N. end. All traces of the western wall had vanished and its place was filled to a considerable depth with seventeenth to eighteenth century building material, etc.

Room No. 2A. The upper floor was provided with a substantially-built and somewhat U-shaped hearth. Centrally the foundations of this consisted of a concrete floor, 4 inches thick, composed of mortar, broken tiles, and small pebbles. Over and surrounding this was a rather thick bed of heavily burnt clay. The back next the wall was packed with bits of sandstone and broken tiles. The objects found at the periphery of the hearth were some small bits of pottery (no rims),  $4\frac{3}{4}$  ounces of waste bronze, and a fragment of a thick-walled crucible bearing traces of the same kind of metal. Beneath the concrete foundation were the bolt of a lock, a few iron nails, some bits of blue glass and fragments of calcined bones.

Two pockets of refuse occurred in the floor on the N. side of the room. One contained the group of four remarkable vessels (Pl. XIII, Figs. 10 a-13 a). The other a coin of Nerva (I Æ).

Room No. 3. The only object of interest found in the floor of this room was the iron sheath for a dagger (Pl. XII, Figs. 8-8 b).

Room No. 3A. Here the lower floor attained a maximum thickness of 1 foot 9 inches. It was well capped with charcoal and comminuted mussel shells (*Mytilus*), forming a layer 2 inches thick near the hearth.

The upper floor was 1 foot 4 inches thick, and also capped with the same kind of materials as the lower, including, however, some small fragments of calcined bones.

The hearth (Text, Fig. 1) to the upper floor was in a very good state of preservation. Its foundations consisted of a bed of clay resting upon the lower sand floor. Centrally the clay had been hollowed out into a basin-like cavity which was filled with broken roofers and gravel set in mortar. Over the main portion was a layer of thick tiles, some perforated, all badly cracked and the central ones pulverised by the action of fire. Behind the tiles was a backing of clay extending towards the face of the wall. A series of seven roughly-dressed stones, placed on edge and bedded in mortar, formed a semi-circular kerb, which projected about 4 inches above the floor of the hearth. Beyond this proximally, on both sides, were some large, irregular blocks of sandstone, all set in mortar and projecting considerably above the floor-line of the hearth. The use of these irregular bits of sandstone seems doubtful. That they were not intended to carry

iron bars for supporting camp kettles or the like seems clear, as they presented such an uneven surface. On the other hand they may have served as 'fire-dogs' to prevent sticks and logs from falling away from the hearth.

ROOM No. 4. Below the sand floor, and also below the level of the footings near the surface of the rock, were marked traces of a hearth.

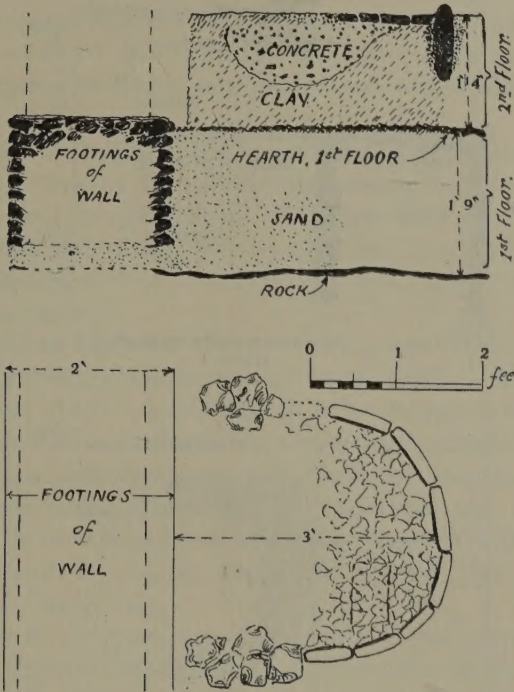


Fig. 1.

It seemed to pass under the wall, and may have been the result of a camp fire in use before the erection of the buildings.

ROOM 4A. The upper floor to this room, though mainly of sand, was very dirty, and patched with odds and ends, stones, gravel, bits of wall plaster, broken pottery, imbrices, and roofers. The last named almost covered the eastern half of the floor. This floor produced an interesting collection of broken pottery, including a remarkable green glazed bowl (Pl. XIII, Fig. 8) found in association with a coin of Vespasian and one

of Domitian (Cos XII or XIII), two fragments of a Samian bowl (Form 29), with late Flavian decoration, and the stamp CRESI M.

The hearth (Text, Fig. 2) occupied the same relative position as those in the other huts. In this instance, however, the back was U-shaped,

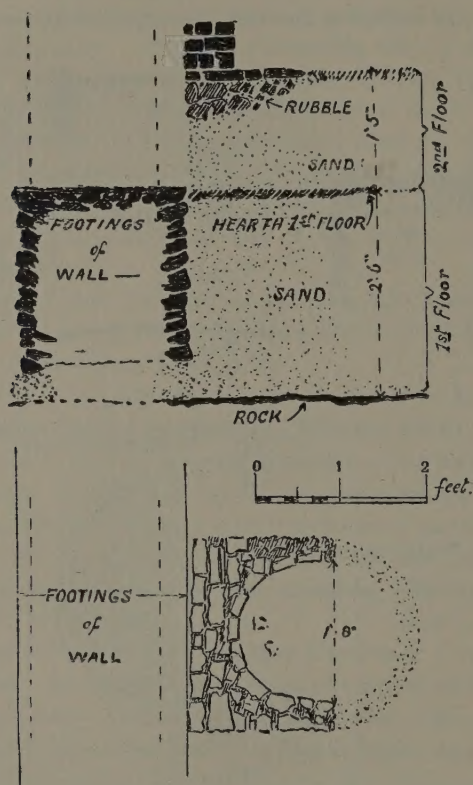


Fig. 2.

formed of three courses of broken roofers, and raised 7 inches above its floor. The space between the outwardly-projecting arms of the arc was covered with broken tiles set in mortar on a rubble foundation, and beyond them was a layer of heavily-burnt clay.

The small uninscribed altar (Pl. V, Fig. 1) came from a mixed deposit immediately over the level of the upper floor. It was found lying against the north party-wall of the room.



Room 5. Like the rest of the rooms of this block this had two floors, but in this instance the upper one was of cement, the lower one only of sand.

The room seemed to have been partitioned off at a distance of 6 feet from the N. party-wall. At that point there were two vertical slabs of plaster 2 inches apart and 5 feet long. These were firmly cemented to the floor. The maximum height was 9 inches, but the upper edges were broken and jagged suggestive of a taller structure. The impress on the inner surfaces of the plaster afforded no clue as to the nature of the internal support. If timber of any form were used all trace of it had vanished.

The cement floor (Pl. IV, Fig. 1) showed two distinct levels or layers. The surface of the lower had a decided dip towards the centre, due it may be either to long usage or sinkage. The upper layer presented a comparatively level surface, and measured a foot thick near the centre of the room but tapered out to four inches at the sides. Nearly the whole of this floor was removed.

The sand floor which had been so effectively sealed up proved rich in small finds, affording significant evidence for the dating of the site. Two post-holes (see Pl. II) occurred close up to the footings of the wall, but there was no trace of a hearth. The principal finds of pottery included fragments of a carinated Samian bowl (Form 29), many pieces of the typically early Samian dish (Form 18), including the base of one with the stamp OF COTTO, and two remarkable dishes (Pl. XIII, Fig. 14). Singularly enough the two coins found in this floor were also of Vespasian and Domitian, respectively.

Not the least interesting of the finds were three small crucibles (Pl. X, Fig. 1) and fragments of others; a clay nozzle with five fine piercings; pieces of vitreous slag bearing traces of bronze; waste bronze in the form of nodules and clippings; a large quantity of burnt clay, some with vitrified slag attached. This group, mixed with a mass of fine charcoal, was found buried in the floor near the centre of the room.

The natural surmise seems to be that this hut was used in the first instance as a bronze-worker's shop some time towards the closing years of the first century A.D., that at or about that time the floor was raised, as was evidently the case also in the other rooms, but that in this case *opus signinum* was put in instead of sand.

Room 5A. Both floors of sand.

The hearth to the upper floor consisted principally of a slab of sandstone with the front angles rounded off. Its dimensions were: 2 feet 6 inches  $\times$  2 feet 5 inches, and from 3 to 4 inches thick. It was heavily burnt and cracked by fire, and was bedded in and backed by rubble-concrete.

The hearth to the lower floor was of clay and heavily burnt.

Two small pockets of refuse occurred in the lower floor. In one of these (NE. corner) was a set of 28 counters (Pl. VI, Fig. 1) in three colours; a large iron knife, some bits of scrap-iron, etc. In the other, which was immediately N. of the hearth, were many bits of waste bronze, some vitrified slag bearing traces of bronze, some angular bits of clay, partly vitrified, which seemed to have been used as props or wedges, a bronze finger-ring with regardant busts of Isis and Serapis (Pl. VI, Fig. 4), and 14 iron nails. The Samian shards associated with this group represented the following forms: 18, 27, 30, and 67. Here again the inference to be drawn from these finds seems to be that the legionaries occupying the hut during the early period of the occupation were metal-workers.

## VERANDAHS

These were explored on both sides. The floors were of sand, but the line of demarcation between them was not generally so strongly pronounced as was the case in the floors to the huts.

BLOCK A. There was a clay hearth on the surface of the upper floor opposite the first post-stone (S. end).

Some typically early bits of pottery came from the lower floor including the stamp OF NGRI. But on the whole, finds were relatively scanty.

The foundations for three post-stones were found. They were rather massive structures, formed of rubble, and of similar construction to the footings of the walls, though larger bits of rock were generally used. They were roughly cube shaped, the first two from the S. end measuring approximately 2 feet 7 inches square at their bases. The spaces between them measured 8 feet 3 inches and 8 feet 8 inches respectively. Opposite the opening between the second and third from the S. end and just within the line of their inner faces, was a row of large, flat, dressed stones set on edge, and measuring over all in their longer axis 6 feet. Its use is not clear, but if it was intended as a kerb it seems to be on the wrong side of the pillars. There was a similar row of large stones on the opposite side of

the road, but in this case it was placed well outside the line of post-stones and may have served as a kerb between road and verandah.

BLOCK B. The surface of the upper floor (Pl. IV, Fig. 2), though not very clearly defined in places, seemed to have been carried up to about the middle line of the post-stones. On the other hand the line of demarcation between upper and lower floors was clearly indicated.

Some interesting forms of early pottery were found in the lower floor, clearly indicating a late Flavian occupation.

Two post-stones and the foundations of two others were found. The footings of these were similar in construction to those on the opposite side of the road, but two of them were capped with larger stones.

The post-stones to the first two were cubelike. The first of these at the S. end was chamfered on two sides only; and centrally on its upper surface, at the N. and S. ends respectively, was a small, shallow dowel hole, 3 inches long, 1.6 inches wide, and 0.5 inch-0.7 inch deep. The second post-stone was chamfered on all four sides; the dimensions of this were: base 1.5×1.5 feet, height 1 foot. The base of the other gave exactly the same measurements except that the height was 1 inch less. Both examples are preserved in the Bishop's garden.

The foundations of the third post-stone were explored, and at the lowest level, partly buried in the rubble, was a post-stone, lying upside down. This, though slightly smaller, was very like the others and had all four sides chamfered.

Two post-holes occurred in the lower floor: one opposite the first, the other opposite the third post-stone respectively; they were well inside the verandah.

## THE ROAD

One transverse section nearly 8 feet wide was excavated at the S. end, and very narrow longitudinal sections were cut on the outside of each row of post-stones. In all cases the metalling consisted almost entirely of broken rock with a free infilling of soil and sand. Here and there were boulders and bits of roofers, etc. In the cross section the upper surface at the S. end was for the most part quite clearly defined and showed unmistakable signs of wear. On its surface at the SE. corner of our section was a rather large clay hearth, the eastern limits of which were defined by two massive stone slabs set on edge. The bronze brooch (Pl. VII, Fig. 2) was found immediately below the layer of burnt clay.



## GENERAL

No evidence of a drainage system was discoverable on any portion of the site explored. But the natural drainage here is good, and rain-water disappears very rapidly where there is no transported clay.

Search was made on the E. side of block B opposite room 1A, for traces of the eavesdrop. At a distance of 4 feet broken rubble footings were found, but nothing was left *in situ*. There was, however, an infilling of sand up to the level of the floor of the room in which were some fragments of pottery and glass.

## SUMMARY

In my former report (*l.c.*) I stated that the general results derivable from the excavations showed that there was evidence that the earliest occupation dated back to the beginning of the Flavian period, and that there appeared to have been a continuous occupation of the site to the close of the fourth century. Taken in the light of our more recent finds this statement, in a very large measure, is substantiated. We have quite definite evidence of an intensive occupation of the site during the closing years of the first century, possibly during the reign of Domitian (81-96), at which period the barrack blocks seem to have been erected. Finds that can be attributed to the later periods of the occupation, especially third and fourth century pottery, were certainly less frequently met with than those belonging to the first and second centuries.

The hypothesis held hitherto by archaeologists in general was that the northern part of the city, including the Deanery Field, did not fall within the line of the north wall of the early fortress—it was too far north for them.<sup>1</sup> The evidence which we have brought to light, however, clearly links up the site with the early occupation of Deva. Our discoveries, moreover, seem to show that the present North Wall of the city stands on or near the line of the wall of the early fortress. Since the present East Wall is also on the line of the Roman fortress this would bring the Deanery Field into the north-east angle. And according to the standard architecture of Roman fortifications as found elsewhere within the Empire, it is the barrack blocks of the legionaries that one would expect to find in that quarter of the fortress. Our recent finds can be conclusively fitted

---

1. Cf. Watkins, *Roman Cheshire*, plan, p. 86; Simpson, *Walls of Chester*, plan.

into such a scheme and their foundations can be ascribed to the first century of our era.

### ACKNOWLEDGMENTS

I beg to tender my sincere thanks to all those who have helped financially and in other ways, in chief to Mrs. Elma K. Paget, the Misses E. and M. Paige Cox, The Dean, Mr. W. F. Irvine, Mr. E. Peter Jones, Mr. G. W. Haswell, and Mr. W. J. Williams. A word of praise also to my constant companion 'Ned' Dickinson—a pleasant, keen, and intelligent fellow.

### FUTURE WORK


No other site in Chester is more likely to add to our knowledge of Deva than this open field. It is indeed the only available spot that can be explored systematically, at any rate to any marked extent. Finds of the first importance have been made and there is good promise for more to come. A further debt is now due to the Dean for permission to explore the ground immediately north of the sections of barrack blocks already opened. Financial assistance has been promised, a committee has been formed, and we hope shortly to be able to commence operations—possibly before this report appears in print.

### THE FINDS

#### INSCRIBED MARBLE TABLET

##### Plate V, Fig. 2

Block of white marble; plan somewhat D-shaped, intended, it may be, to fit in a niche; upper surface with an iron pin or dowel, evidently intended to hold the statue of a genius. Dimensions: front 7 inches × 3·7 inches, depth from back to front 5 inches. The inscription is in clearly-cut rustic lettering and reads:—

GENIO · SIGN   
 LEG · XX · VV  
 T. FL VALERIANVS  
 COLLEGIS · D · D

The transliteration of this as given by Mr. R. G. Collingwood (*in lit.*) is 'To the Genius of the Standard-bearers of the Twentieth Legion

"Valeria Victrix," presented to his colleagues by T. Flavius Valerianus.' He adds also that the break at the end of the first line may have taken away two or possibly three letters. Further that 'the signifers of the XX Legion would form a *collegium* and a *collegium* always has a *genius* of its own, its corporate *genius* or *esprit de corps*: and Valerianus, as a signifer and member of the *collegium*, might dedicate a statue to this *genius*. On the other hand there ought to be a *genius* of the standards though I cannot find a definite one of his worship. In any case it is to my mind certain that Valerianus was a signifer, and the college in question is the college of the signifers of the legion. I think there is no other British instance of such a college, and British references to military *collegia* are exceedingly rare.'

Cf. Collingwood, *Jour. Rom. Studies*, 1925, p. 247.

Find-spot the NE. corner of room No. 1, Block A, in a mixed deposit just above the floor-line.

#### ALTAR

#### Plate V, Fig. 1

This small altar of local sandstone bears no trace of an inscription. It is heavily moulded on all four sides; the volutes are plain; the space between them is perfectly flat and there is no focus. Height 9.5 inches; dimensions of upper moulding 8×7.8 inches; the plain band between the mouldings 5.6×5.6 inches. Found just above the floor line in room 4A, block B, close up to the N. party-wall. It appears to belong to the late second or the third century.

#### OBJECTS IN METAL, BONE, STONE, ETC.

#### Plate VI

1. Hoard of twenty-eight gaming pieces or counters, in vitreous paste. The colours represented are: white (21), black (5), and blue of two shades (2). This series may represent a more or less complete set; used, it may be, in a game of chance or skill. Odd examples of these small gaming pieces, usually in black or white, are not uncommonly met with on Romano-British sites, but sets seem to be extremely rare.

In a pocket of refuse, lower sand floor of room 5A, block B. Late first century.



2. Decorated bronze stud with stout tang or pin for attachment to girdle or strap. In the centre, in high relief, the Falstaffian mask of Seilenos, with bald head, short beard and heavy moustache. Ears protected with cheek-guards. Beyond the mask are three concentric rings. The technique of this is good and the metal unusually thick and strong. Diameter 1·5 inches (·039 m.).

Lower sand floor, room 5, block B. Late first century.

3. Decorated bronze stud with pin at back for attachment (imperfect). Charioteer driving biga. Whip in r. hand, reins in l. Horses galloping r. over fallen (?) competitor. Harness of horse on offside with a row of pellets (? phalera) crossing over shoulder. A transverse row of pellets beneath the horses. The motif enclosed by a half-round fillet, edge bevelled. Metal very thin and fragile. Diameter 0·7 inch (= ·018 m.).

In a mixed deposit over footings of wall, block B.

4. Finger ring of bronze. Bezel with a row of pellets; within it the regardant busts of Isis and Serapis in high relief. The former with radiate crown; the calathus in Serapis indicated by a large pellet. Transverse diameter of ring ·017 m.

For similar crowned head of Isis see Walters, *Brit. Mus. Catalogue of Lamps*, No. 946.

Lower sand floor, room 5A, block B. Late first century deposit.

A silver snake-ring, badly distorted and burnt, was found in room No. 1, block B.

#### Plate VII

1. Wheel-brooch of bronze and enamel (imperfect). Projections at margin with dot and concentric rings. Bezel with cable pattern. Central disc green, concentric band blue.

Late deposit over floors of room 3, block A.

2. Brooch of bronze. Bow gilded, the rest silvered or tinned. Spring bilateral, held together by chord, and protected by half-round cylinder. Bow with one large and two small transverse flanges, ridge of distal half with a series of deeply-cut notches.

Found in the clay floor of the hearth, just below the heavily burnt layer; roadway (Pl. II). Similar examples have occurred at Colchester and South Wilts (Coll. Brit. Museum) but the form is new for Chester.

3. Dragon esque or S-shaped brooch (distal portion missing), with settings of green, blue, and white enamel, of which the central lozenges

and the JP portions of the design are white. May's example from Templeborough (p. 71, XV, 1) is an almost exact parallel, differing only in the colour scheme of the setting.

Verandah, opposite room 5, block B, in association with the legionary stamp (Text, Fig. 4 b), dated to the closing years of the second or the early third century.

4. Penannular brooch of bronze, with loop of iron pin attached. Terminals with writhen knobs. Casual find.

5. Brooch of similar type to the foregoing, but badly corroded and broken.

Late first century deposit. Verandah, block A.

A bronze brooch with strongly-arched bow was found in the floor of the eastern verandah. Though badly corroded it is like the one found at Richborough (Bushe-Fox, p. 43, Pl. XII, 3), but is larger and relatively more robust. Late first or early second century.

6. Stylus-like object of bronze. The tang end appears to be complete and may have been fitted into a handle of some kind. First century deposit. Room 5, block B.

7-10. Bronze leaf-shaped pendants, all of them cut from very thin sheet-bronze. Used it may be as harness trappings. No. 7 is from a late first century deposit, under the cement floor, room 5, block B.

11. Metal terminal of bronze with central slot or eye for attachment of T-shaped hook. Used as a fastening for a girdle or the like. In a mixed deposit over footing to central dividing wall, block B.

For a precisely similar example cf. *Bonn. Jahr.*, CXI-CXII, p. 385, XXIV, 12.

12. Pendant of bronze decorated with lines and curves of punctures. Though of a much more ornate character it seems to belong to and was used in a similar way to Nos. 7-10. Found with No. 11 and undated.

13. Narrow pendant of bronze. Found in a mixed deposit, room 4A, block B.

14. Pendant or hanging ornament of bronze, possibly one of a set attached to a phalera. The acorn-like terminal and the spiral binding are all formed of one continuous piece of metal. In a mixed deposit, over floor of room 3A, block B.

15. Bronze spring clip, used it may be, for suspending a pendant. First century deposit, below cement floor, room 5, block B.

16. Small pendant of bronze, with spheroid terminal and lateral loop for attachment.

### Plate VIII

1. Terminal mounting of bronze, for sword or dagger sheath. Tip filed or cut into the form of a X; both sides faintly chamfered, one of them with two piercings for attachment to sheath. Room 4A, block B, with No. 3.

2. Scabbard mount of bone. Central area with a slightly raised, shield-shaped design, with deeply-grooved bilateral volutes near the upper portion. Two piercings immediately above the volutes; upper edge notched or scalloped. One lateral edge only is quite perfect and this has a distinct inward 'cant' or flange for gripping the sheath.

On the surface of the rock in the roadway. Unfortunately the metalling of the road seemed to have been disturbed as mortaria rims belonging to the third or the fourth centuries were found in close association with the scabbard mount and also some bits of first-century pottery.

The only parallel known to me is now preserved in the British Museum. This, though slightly smaller than the Chester found example, is very similar in form and design.

3. Bronze sheath-mounting for sword. Imperfect, and the rings for suspension lost. A sketch showing the method of attachment to the sheath is shown immediately below the Fig. 3. Cf. *Brit. Mus. Guide to Greek and Roman Life*, p. 105, Fig. 109; *Bonn. Jahr.*, CXI-CXII, Pl. XXX, Fig. 36.

Found with the terminal mounting for sheath, No. 1.

4. Terminal of bronze for attachment to strap or girdle, in the form of a pinnate leaf. One end imperfect. This object is of a very solid nature and is fitted at the back with two robust pins for attachment. Cf. Curle, *Fort of Newstead*, Pl. LXXVI, 9. Room 3A, block B.

5, 6. Bronze studs or harness mountings of two types. Two pairs of No. 6 were found together in room 4A and odd ones came from other portions of the same room. Ten examples of No. 5 were found together in a layer of charcoal with late first-century pottery, in the verandah, block B.

7. Right half of bronze handle for a casket in the form of a dolphin. The technique of this piece is good. Found in a mixed deposit over the floor of room 3A, block B. Cf. *Bonn. Jahr.*, CXI-CXII, Pl. XXXIII, Fig. 3; Curle, *Fort of Newstead*, Pl. LXXXII, 2.

8. Strip of beaded bronze. Use unknown. Found near the hearth in room 3A, block B, with No. 9.

9. Part of mounting of bronze, with stud at back for attachment to strap or girdle.

10. Ring of iron, belonging it may be to chain armour. Found with Nos. 1 and 3.

11. Bronze buckle attached to a thin plate of iron. Found in association with the preceding.

### Plate IX

1. Plate of bronze with ring attached. Use uncertain but possibly a terminal fitting for a girdle. Room 4A, block B.

2. Rectangular fitting of bronze with a flat, slender, tang-like extension at each of the lower corners. Use unknown. Room 5, block B.

3. Terret of bronze for harness. The plate to which the rectangular loop is attached is circular; and the tangs are strong and arched. In a mixed deposit over the central dividing-wall, block B.

Cf. *Bonn. Jahr.*, CXI-CXII, p. 375, Pl. XXX, 26.

4. Object of bronze, possibly a charm, but may also have been used as a terminal for a strap. From the lowest level of the verandah, block B.

5. Bronze pin, the head of which is capped with pale, turquoise blue, vitreous paste. Found in the corner of room 2, block A, with a coin of Vespasian. Late first century.

6. Bronze nail with hemispherical head and broadly rounded flange. Room 4A, block B, with the bronze sheath-mounting for a sword, etc., Pl. VIII, Figs. 1 and 3.

7. Stud of bronze with radial flutings and broad rounded flange (imperfect). Room 3A, block B, with the group of vessels, Pl. XIII, Figs. 10 a-13 a. Late first century.

8. Bronze nail with fluted head. Early deposit, verandah, block B.

9. Spoon (*cochleare*), with part of shaft missing. Bronze silvered. Type IV, *Brit. Mus. Guide Antiq. Rom. Britain*, p. 40, Fig. 34 (Colchester). Second century. In a mixed deposit with No. 3.

10. Bronze terminal or loop, possibly for a strap, with two hemispherical-headed rivets passing through both plates. Both ends dilated, and their margins decorated with fine parallel lines just within the margins. Central area raised, and obliquely grooved. In mixed deposit over floor of room 2, block A.



11-13. Buckle and buckle attachments of bronze. All from undated deposits.

14. Part of angular framework of bronze, with rivets and rivet holes on the broader flange. Used it may be for an edging to a leather girdle. Verandah, block B. Deposit not datable.

### Plate X

1. Crucibles. Three examples, all of them broken, but admitting of complete reconstruction. Form resembling a truncated egg. Inner wall of relatively soft, muddy brown clay, containing a free admixture of quartzite sand and the impressions of leaves and stems of grass or similar graminaceous plants. Outer wall vesicular and of the consistency and hardness of coke, the outer surface highly vitrified, and exhibiting traces of bronze or copper; but there was no trace of such metals in the interior of the vessels. The line of demarcation between the outer and inner walls of the crucibles was often very clearly defined, and in many instances the walls had separated, leaving the outer surface of the inner wall of clay quite smooth and intact. Clearly the inner wall had not been subjected to the intense heat of the outer one, otherwise it would have shown some indication of this. Indeed the construction and technique of these vessels seem to indicate that the clay body had been dipped into a molten mass of vitreous slag, and then set aside for use.

The dimensions of one example are: height .076 m., greatest diameter .078 m., diameter of rim .068 m., depth of interior .063 m., diameter at the top .044 m.

Many fragments of similar crucibles were found with the above, also a clay nozzle with five fine piercings, numerous bits of burnt clay, some of them with traces of slag attached, etc. Period—late first century. Room 5, block B.

2. Leaden dish or bowl with pinched-in spout. In the centre of the interior of the base is a large and somewhat circular depression. Some portions of the interior had marked traces of a dark red pigment. Length .19 m., width .18 m., height .065 m., weight 3 lb. 10 oz. Found well over the floor of room 3A, block B, and belongs apparently to the later period of the occupation.

3. Two spatulae of bone made from the scapulae of a large mammal. Both examples have been trimmed into shape and exhibit knife and saw cuts. From the floor of room 2A, block B.

Two additional examples were also found in block B, but these were rather badly broken and imperfect.

4. Five ballista balls cut from the local sandstone. These and several other examples were found in deposits above the floors in block B, always in association with pottery, etc. belonging to the later period of the occupation. None was found with late first or early second century vessels.

The perfect specimens are roughly spheroid, but generally have one or more slightly flattened faces. In weight they vary between about 2 and  $5\frac{1}{2}$  lb.

### Plate XI

1. Leaden hammer with socket for attachment to haft extending through the head of the implement. Face bearing sharp impressions, .0005 m. wide suggesting that it had been used for straightening a harder metal, possibly fine wire. Length .092 m., weight 5 oz. On surface of sand floor, room 3A, block B.

2. Leaden pyramidal weight. Height .08 m., weight 1 lb. 10 oz. Found in association with the leaden bowl, Pl. X, Fig. 2.

3. Leaden sheath for a shoemaker's last. When found this remarkable object had been crushed by earth pressure into an almost shapeless mass, though the outline of a human foot could be traced. The sheet of lead, .001 m. thick, from which the sheath had been cut was subsequently flattened out and cleaned. It was then possible to trace the outline of a foot or shoe,  $9\frac{1}{2}$  inches ( $=.241$  m.) long, by the presence of a well-defined seam (Text, Fig. 3). Other seams or folds were also clearly defined and there was a large round hole just beyond the heel, and several small square peg-holes in various places. By folding the sheet of lead along the lines of the seams, it was readily transformed into a kind of leaden golosh or shoe (Pl. XI, Fig. 3). That it had been attached to a wooden last by means of pegs or nails at various points is indicated by the presence of the small square holes. The large hole at the heel end is puzzling, and to suggest a use for it is too hazardous. Sand floor of room 1A, block B. Probably late first century.

4, 5. Two roughly formed vessels of lead. They may have been used as lamps, but this is doubtful. Both were made of thin sheet lead and the sides simply folded over and beaten into shape. Found with the leaden sheath, Fig. 3.

6. Bobbin-shaped object of lead. Use unknown. Found with Nos. 3-5.

7. Section of lead water-pipe showing method of sealing up the 'blind end,' by pouring molten metal around it.

8. Net-sinker of lead. The body of this is cylindrical in section and appears to have been cast in a mould. On the other hand the eye end seems to have been flattened out and pierced. Taken in conjunction with the iron fish-hook described on p. 24 this is an interesting find, all the more so as it was found in the front room of the same hut.



Fig. 3.

Lead in the form of waste or trimmings from thin sheets, etc., occurred in many places. And three large sheets were found in the floor of the verandah in block B. The dimensions of these were : 4 feet 3 inches  $\times$  1 foot ; 3 feet  $\times$  1 foot ; and 2 feet 6 inches  $\times$  7 inches respectively.

## Plate XII

1. Massive iron knife of the type usually represented on altars with other sacrificial implements. The thick tang end is provided with a hook for suspension. Though the tip of the blade is missing, it measures over all 9.5 inches ( $= .241$  m.) and weighs 7 oz. Found in the eavesdrop opposite room 1A, block B, with late first-century pottery.

2. Blade of large knife (imperfect) with upturned tip. From lower stratum of verandah, block A. Belongs apparently to the early period

of the occupation. For a knife of similar type see Atkinson, *Lowbury Hill*, p. 50, No. 22.

3. Arrow-head of iron. This is unbarbed, and has a tang end for fitting into the shaft. It is smaller than the examples found at the Fort of Newstead (cf. Curle, p. 189, Pl. XXXVII); but seems to have been subject to the action of fire subsequent to its manufacture and is otherwise badly corroded. Room 3A, block B, in a mixed deposit immediately above the floor.

4. Iron chisel with broad blade and slightly elbowed shaft. This tool bears a striking resemblance to what is known hereabouts as a mason's 'bolster.' Found with a coin of Antoninus Pius over the floor of room 2A, block A.

5. Iron knife of a type similar to No. 1. This, though badly corroded, shows marked traces of having had a new tip welded to the blade. It was found in the pocket of refuse with the set of gaming pieces (Pl. VI), etc. Late first century.

6. Small iron knife, with flat tang, the latter with traces of the rivets which held the bone mountings in position. Room 3A, block B, with late first-century pottery.

7. Iron fish-hook. This is barbed and has an eyelet at the flattened end for suspension. Length .07 m. Fish-hooks of bronze, though somewhat rare, have been found in the Forest Beds at Great Meols, in Cheshire, and are now preserved in the Grosvenor Museum. Parallels for these must have been found elsewhere, though so far I have not been able to trace them. But the point to emphasise here is that our specimen is of iron and therefore noteworthy. Found at the back of the hearth in room 3A, block B, with half a horsehoe and the legionary stamp described on p. 31.

8, 8 a, 8 b. Iron sheath for a dagger. One lateral plate only is represented and this is not quite complete on one side at the hilt end. This is rather a massive structure, .003 m. thick at the edge and .005 m. in the centre. Its weight, after cleaning, was  $7\frac{1}{2}$  oz. It is flat on the inside and slightly convex, in transverse section, externally (8 b). The dimensions given were taken along the line of the old fracture, for the relic was found in two pieces. Inside, along both edges, were traces of a narrow strip of very fine-grained wood, giving an average width of .007 m. There were traces of wood or leather running transversely across the hilt end measuring .022 m. in width. On one side were two iron lugs, and attached to the



lower one was part of an iron ring for the strap attachment from the girdle. These lugs were bolted to the plate by four round-headed rivets (8 a). Four similar round-headed rivets passed through the plate near the edge opposite the lower set, but there was no trace of a lug. A similar series may also have existed towards the upper end but the edge of the plate at that point was broken away. Length of sheath, 9·4 inches (·24 m.), greatest width between the strips of wood just below the fracture, 1·75 inches (·045 m.). Taking the internal dimensions of the sheath we find that it would carry a dagger of typical Roman form and size. In the sand floor of room 3, block B. Probably late first century.

9. Iron knife, or knife-like implement of unknown use. The blade is flat and narrowly lanceolate, and attached to it proximally is a stout angular projection tapering to a point distally. The tang, set transversely to the blade, is broad and recurved. Atkinson (*Lowbury Hill*, p. 50, Pl. XV, 5) describes a knife-blade with a 'thickened back.' In his illustration of the knife, the thickening appears to extend to the tip of the blade and it seems also to be a continuation or extension of the rounded tang. Though the two instruments may resemble each other in a small measure, it is hardly conceivable that they were intended for use in the same way. In a late deposit of the roadway.

Other objects found but not illustrated were: an iron 'pick' with square cutting edges, measuring 6·9 inches long, similar in form to that found at the Fort of Newstead (Curle, Pl. LVIII, 5) but much smaller. Seven writing instruments (*styli*) all more or less imperfect, one of them decorated with rings of gold wire. The blade of an iron trowel; a large iron wedge; a linch-pin; iron key; part of iron lock; iron buckle, etc.

## THE POTTERY

### PLAIN WARES

#### Plate XIII

The period of the occupation of this site seems to be well represented by the various types of vessels found; more especially was this to be seen in the mortaria and the cooking-pots. But there was a preponderance of early forms dating from late Flavian times to the closing years of the second century. Fragments of mortaria that could be attributed to the third and fourth centuries were scantily represented. This decrease in

late forms on this site is somewhat remarkable, and further exploration only may afford an explanation.

The types found in well-stratified deposits or in the small pockets of refuse in the sand floors admit of fairly close dating. As in the former report a few examples chosen in part for their significance in the dating of the site, and in part also for their intrinsic interest, are here illustrated.

1. Mortarium with large hooked rim and well-defined bead on the inside below the upper curve of the rim. Hard buff, gritty clay. Slip cream-buff shading to orange-buff. Potter's stamp (1 a, 1 b) on both sides, but well away from the spout. Unfortunately the terminal letters in both stamps are blurred, blundered and imperfect. Under cement floor, room 3, block A, with pieces of Samian bowls of Form 29, etc. Late first century. This example belongs to Bushe-Foxe's type 34 (*Wroxeter Report*, 1921) there dated about 80-110 A.D.

2. Small beaker of hard fumed grey ware. Rim short and oblique. Shoulder with two broad, faint grooves; body finely tooled; foot strongly outcurved. With the mortarium (1). Late first century.

3. Shallow cup (base missing) with broad, grooved rim, and two girth grooves at the bulge. Fine, hard, grey ware, coated with graphite. Possibly late Celtic. Room 2, block A. Late first century deposit.

4. Cooking-pot of fine orange-red clay. Rim heavily beaded and strongly inbent with a well-pronounced and somewhat angular bead below it. Body wall finely tooled. Room 4A, block B, with pieces of Samian bowl in the style of the Nero-Flavian potter Germanus, etc.

5. Upper portion of tall, bell-mouthed beaker of Belgic ware. Ornamented with three deep grooves, one of them immediately below the overhanging lip, and lines of deep impressions appearing on the inside as slightly raised excrescences. Room 5, block B, with coins of Vespasian (1) and Domitian (1). Late first century.

The fragments here illustrated seem to belong to a vessel of the type figured by May (*Silchester*, Pl. L, Fig. 72), and dated to the Flavian period, 69-96 A.D. For a fragment of ware ornamented with 'impressed round holes, the impressions showing through inside,' cf. Winbolt, *Roman Folkestone*, p. 92, 1.

6. Beaker of very fine, hard, grey ware. Rim massive, oblique, and heavily moulded inside, possibly for the support of a lid or other form of covering. Deeply grooved just above the shoulder and strongly con-

stricted below it—a late Celtic feature. Upper sand floor, room 3A, block B. Late first or early second century. Cf. Bushe-Fox, *Wroxeter Report*, 1912, p. 74, Nos. 28-30.

7. Large olla or jar with tall and slightly out-curved rim and sharply-defined grooves just below it. Orange-red clay. Found with No. 6.

8. Bowl of green glazed ware, shape near 37. Eight pieces conjoined representing about one-third of the vessel. Foot-ring missing. Rim heavily moulded and incurved; below it a large half-round fillet. Sides decorated with vertical hairpin-like loops of white (under glaze) slip, but the over glaze gives them a pale greenish-yellow colour. There is a broad shallow groove below the decoration and a hairlike one near the foot-ring. Glaze, dark green shading to paler green and in one place to a suffused tawny. It is faintly pitted externally and coarsely so in the interior, where the glaze is poor and patchy. Clay dark-grey and slatelike. Found in a shallow pocket of refuse in the upper floor of room 4A, block B, with a coin of Vespasian, Cos IIII, and one of Domitian, Cos XII or XIII. Belongs to the late first or the early second century.

No other example appears to have been recorded. It is certainly distinctive and of excellent technique and may perhaps be of local origin. A green glazed fabric seemed to have been manufactured at Holt, as the late Mr. A. T. Acton had examples of such ware in his collection which he claimed to represent various phases in its manufacture.

9. Cup. Imitation of Drag. Form 27. Coarse red-buff clay, coated with buff-coloured wash, and bearing traces of having been dusted with mica. But the vessel has suffered from the action of fire, subsequent to baking, and is otherwise corroded and worn in places. Room No. 1, block B. No datable objects were found with it, but the vessel seems to be not later than the early part of the second century.

10 *a*. Globular cooking-pot. Rim oblique and heavily beaded. Exterior heavily burnt and smoked. Coarse brick-red clay. Found together with Nos. 11 *a*, 12 *a*, and 13 *a*.

11 *a*. Pot or olla of hard creamy-white clay. Rim tall and oblique. Foot-ring grooved beneath and the domed base is shallow. The decoration consists of four vertical bands of dark coffee-brown rings arranged in double lines. Above them a single rouletted line, and below them a band of six rouletted lines placed closely together.

This clearly belongs to the class of vessels found at Cherryhinton. Cf. *Proc. Camb. Ant. Soc.*, Vol. XLIV, p. 469, Pls. XX, XXI.



12 *a*. A replica of No. 10 *a*, differing only in the form of the foot-ring.

13 *a*. Small thick-walled beaker in dark-red clay, with angular shoulder and outwardly curved rim.

Nos. 10 *a*-13 *a* inclusive form a very interesting group. They were all found together in a pocket of refuse in the sand floor of room 3A, block B, with a coin of Vespasian (Cos III), the iron knife (Pl. XII, Fig. 6), the bronze stud (Pl. IX, Fig. 7), and various other small objects. Period—late first century.

14. Shallow dish of Belgic ware. Rim broad and deeply fluted. Sides curved. Interior of base with five concentric grooves or rings, and heavy, half-round fillet at junction with sides. Underside of base with triple foot-ring, the first or outer one at a slightly higher level than the others. Reconstructed from many fragments found scattered about in the lower sand floor of the verandah, block A.

Fragments of four precisely similar vessels were also found on other parts of the site; these came from block B—(a) room 4A (one); (b) room 5 (two); (c) room 5A (one). These vessels appear, therefore, to have been in general use by the legionaries. On the other hand I have failed to find exact parallels for them on other Romano-British sites. All five vessels bear traces of a coating of bitumen or the like, which readily gives a dull wax-like polish by friction with a soft brush. Period late first century.

15. Pot lid of fumed grey ware. From a mixed deposit, room 5A, block B. Period doubtful but not later than mid-second century.

16. Pot lid with moulded and upturned flange. Fine brick-red clay. Shows marked signs of use and is blackened and chipped by the action of fire. Late first or early second century.

17. Large two-handled dish. Rim faintly grooved at the top. Foot-ring rather shallow. Interior strongly, exterior faintly fluted horizontally. Very hard overbaked clay, varying from grey to red. Core bluish-grey. The vessel is slightly distorted on one side, otherwise it is an exceptionally fine piece. Lower sand floor of verandah, block B, with pieces of Samian vessels belonging to the late Flavian period.

18. Base of beaker or small olla. Exterior burnished and decorated with a large herring-bone pattern. The interior is rough and uneven and bears impressions of the potter's fingers. The decoration is exceptional and somewhat remarkable. It was found just above the upper floor of

room 4A, block B. The date is uncertain, but is probably to be put to the late second or to the third century.

SAMIAN (*terra sigillata*)

Both plain and decorated forms were sparsely represented, and very few pieces call for special mention in this report.

Form 29 (Text, Fig. 4). Several fragments conjoined representing about one-third of the bowl. Upper frieze with portions of three metopes divided by five vertical wavy lines, the corners tied with rosettes: (1)



Fig. 4.

notched demi-medallion enclosing spiral ending in rosette; (2) part of dog to r. as in (4); (3) the demi-medallion repeated; (4) dog (Atkinson, *Pompei, J.R.S.*, Vol. IV, Pl. VI, 35) chasing rabbit, of the latter traces only remain. Lower frieze with continuous winding scroll; upper lobes with large, divergent leaves similar to Atkinson's (*ibid.*, VIII, 43), and two buds or catkins; lower lobes: (1) with winged horse (*ibid.*, IV, 17), and (2) filled with arrow heads. In the base of the interior is the potter's stamp, but this is too faintly impressed and blurred to be determined. Found in the lower sand floor of the verandah, block B. Period—late first century.

The potters' stamps on plain wares are given below:

1. OF  $\widehat{\text{ALBANI}}$ . On Drag. 27. A stamp with similar ligatures is recorded from Neuss (*Bonn. Jahr*, CXI-CXII, p. 336), and London

(Walters, M. 1839). Oswald and Pryce give Sels, Rottweil, and Carlisle, and place Albanus as a South Gaulish potter of the Claudius-Flavian period. Found in lower sand floor, verandah, block B.

2. OF COTTO. On Drag. 18. Oswald and Pryce (p. 57) place Cotto among the Flavian potters; some of them, however, were also at work in Trajan's reign. Underneath, inside the foot-ring, is the graffito or owner's name, IVLLI... Found under the cement floor, room 5, block B.

3. CSOBISO M. On 18/31; high cone but good glaze. A Lezoux potter who worked, apparently, during the latter half of the second century. Surface of upper floor, room 2, block B.

4. C-RESI M.=CHRESIM(I). On very small 33, slightly discoloured by fire. A potter of Motans. Late first or early second century. Cf. Hayter's list, *Jour. Chester Arch. Soc.*, N.S., XXVI, p. 16. Room 4A, block B, surface of second floor.

5. O-O-CIO : t.=COCIO : F. On a small 33, with good dark glaze. Cf. May, *Silchester*, p. 214, and *C.I.L.*, XIII, 10010, 603. Find-spot as No. 4.

6. OF NGRI. On Drag. 27. Glaze good but discoloured by fire. Walters (M. 685) figures a precisely similar stamp which he reads *Of(ficina) N(igri)*. For the potter Niger see also *Bonn. Jahr.*, CXI-CXII, p. 343, and Oswald and Pryce, p. 16. From the lower floor of the verandah, block A.

7. Stamp in form of pinnate leaf. On 33. This, though not quite complete, is very like the one figured by May (*Silchester*, LXXXI, 17). Similar leaf-stamps also occurred at the Fort of Newstead, and Curle (p. 242) states that they probably belong to the second century. Ours was a casual find made during the filling in.

#### IMITATION SAMIAN, ETC.

Five fragments of this ware occurred on various parts of the site. All of these were coated with a very soft vermilion-red slip which was very difficult to preserve. On the interior of the base of one vessel, probably Form 37, is part of the potter's stamp IXI : I-V///// within a large rouletted ring. It resembles very closely certain of the stamps found on similar ware at Sandford, Oxon. Cf. May, *Archaeologia*, LXXXIII, p. 231, Fig. 4. Found in a mixed deposit over the footings of the dividing wall, block B.



## LEGIONARY STAMPS ON ROOFING TILES, ETC.

Text, Fig. 5 *a*. This is retrograde and the first letter, L, is missing. The characters are decidedly rustic and the last three are ligatured. It was found at the back of the hearth in room 3A, block A, in close association with the iron fish-hook (Pl. XII, Fig. 7), half an iron horseshoe, some bits of a globular amphora, and a fragment of the small Samian cup, Form 27.

Text, Fig. 5 *b*. This is also incomplete, but it is a well-known stamp, with strikingly characteristic lettering. Four examples occurred on

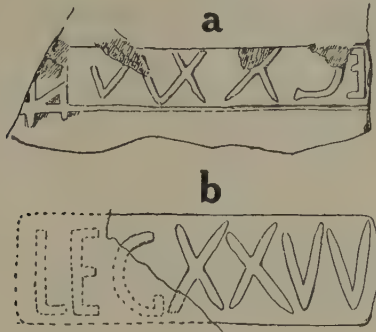


Fig. 5.

roofers used to protect the Roman burials in the Infirmary Field, Chester. One tile from grave 29 (cf. Newstead, *Annals of Arch. and Anthropol.*, vol. VI, p. 155) bore the impressions of two of these stamps. It can be dated to the closing years of the second or the early years of the third century.

The objects found in immediate association with this stamp were the dragonesque brooch (Pl. VII, Fig. 3), and some fragments of a flanged bowl of late second or third century form.

QVIETI. on handle of amphora. This is clearly part of the stamp C·ANTON·QVIET·I·. Cf. Curle, *Fort of Newstead*, LII, 6; and Bushe-Fox, *Richborough*, 1926, p. 84.

Upper floor, Room 4A, block B. Late first century.

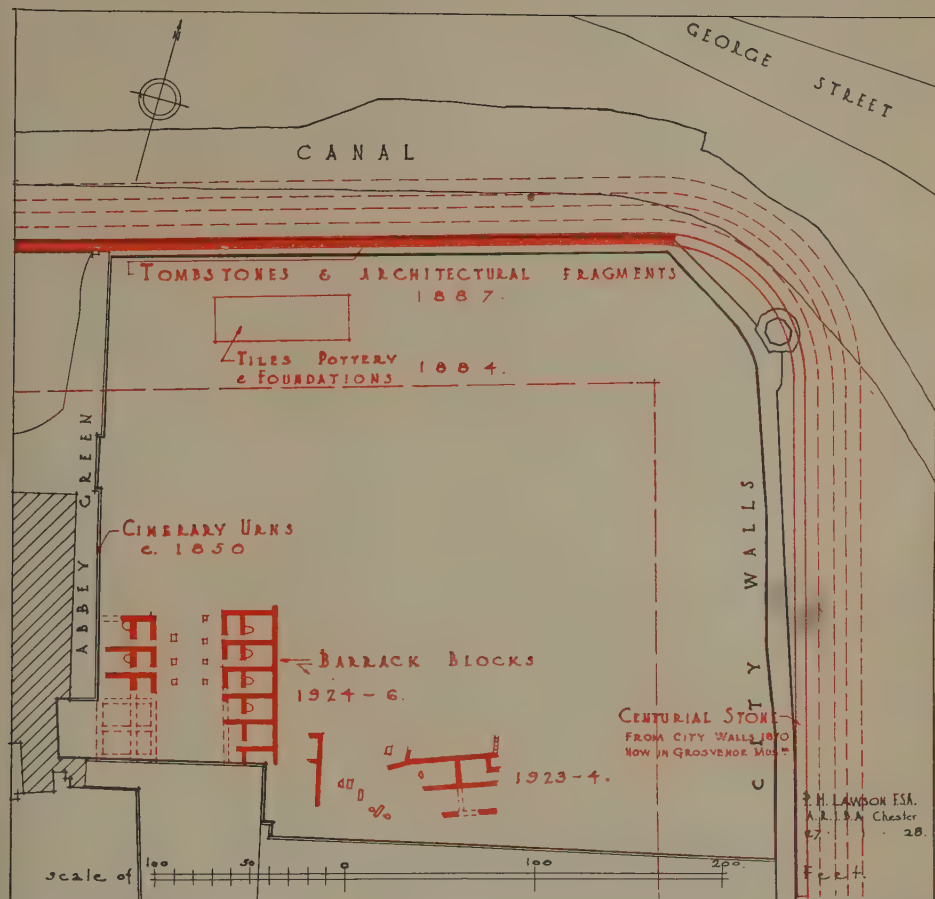
## GLASS

Small bits of window glass occurred sparingly over the whole of the site. Fragments of beakers and square-sided bottles were not

uncommon ; the colours represented were blue (common), green (twice), and amber (once). Of the rarer kinds there were one small fragment of a facettèd beaker in clear glass, and one of millefiori—white, blue, and yellow.

#### COINS

A description of the coins will be given in a later report.



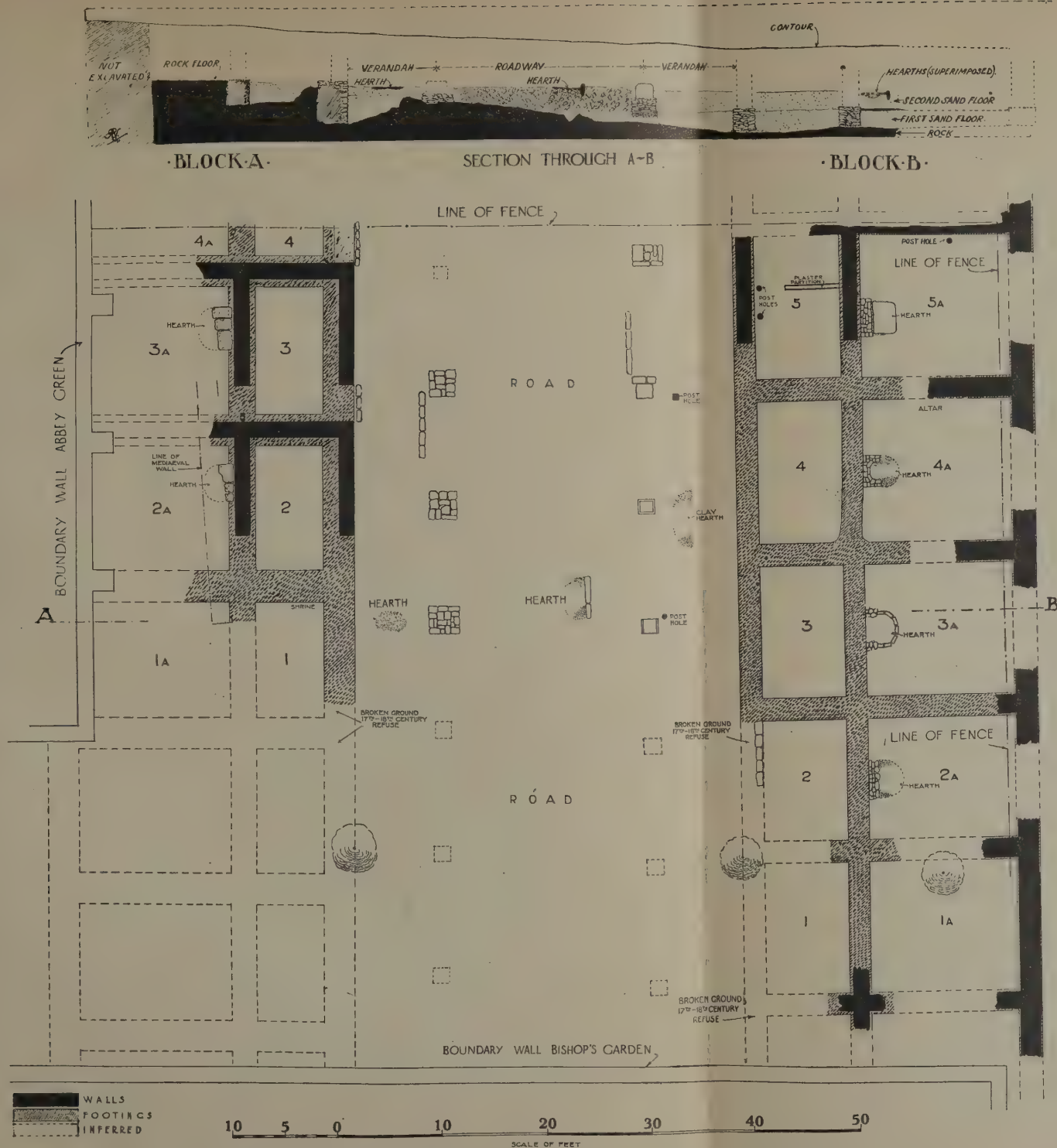
By permission of the  
Deanery Field Excavation Committee.

# PLAN OF THE DEANERY FIELD, CHESTER.

Showing the Sites, Explored 1923-26.







DEANERY FIELD, CHESTER. PLAN AND SECTION OF BARRACK BLOCKS. 1924-26.

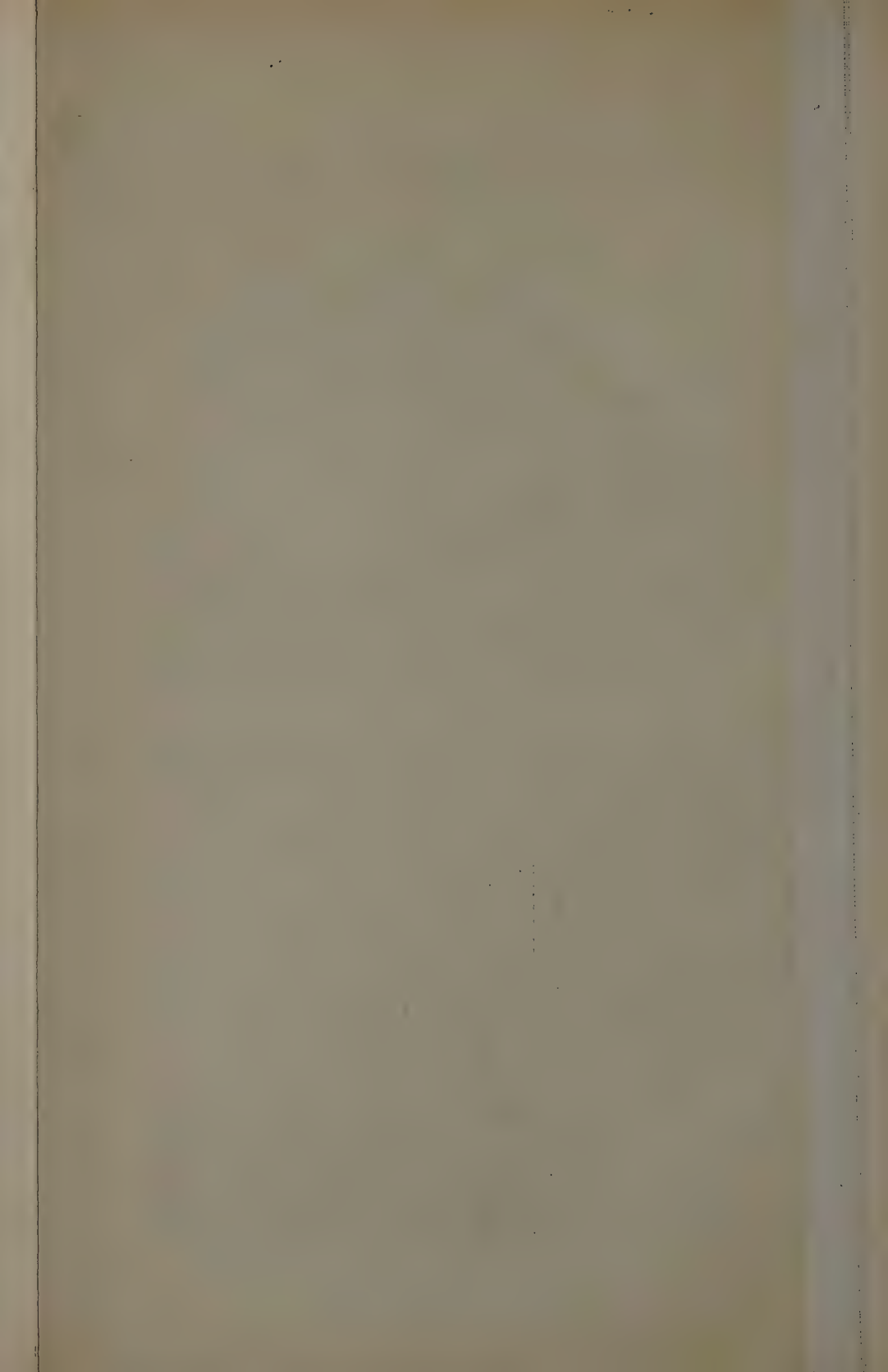




FIG. 1. E. WALL BLOCK A, LOOKING S. ROOMS 2 AND 3.  
*a.* Threshold opposite doorway.  
*b.* Cement floor. *c.* Lower sand floor.  
*d.* Footings of wall. (Page 6.)



FIG. 2. FOOTINGS TO CENTRAL DIVIDING WALL,  
BLOCK B, LOOKING N.  
*a, a'* lower sand floor. *b, c* backs of hearths.  
Rooms 4a, 5a. (Pages 7-12.)





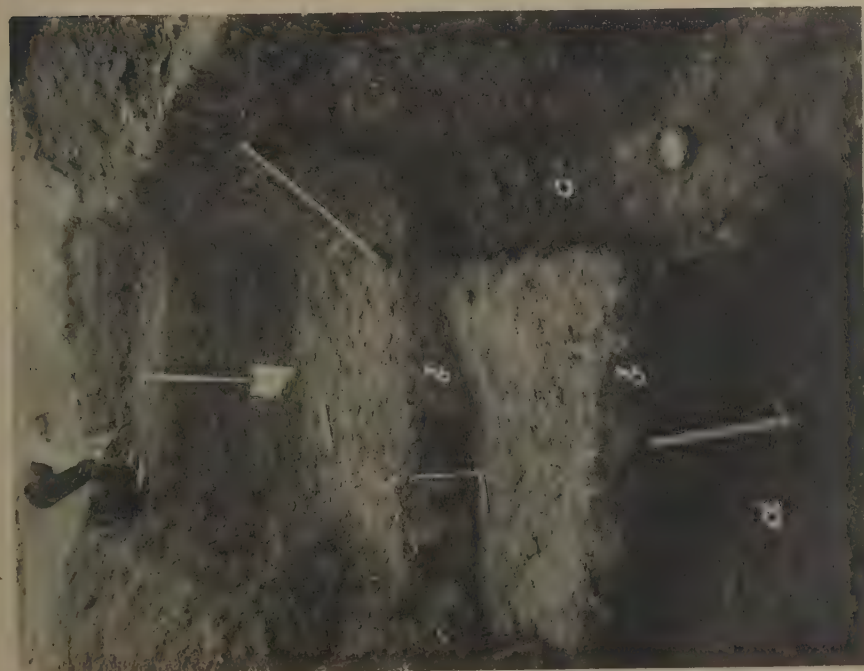
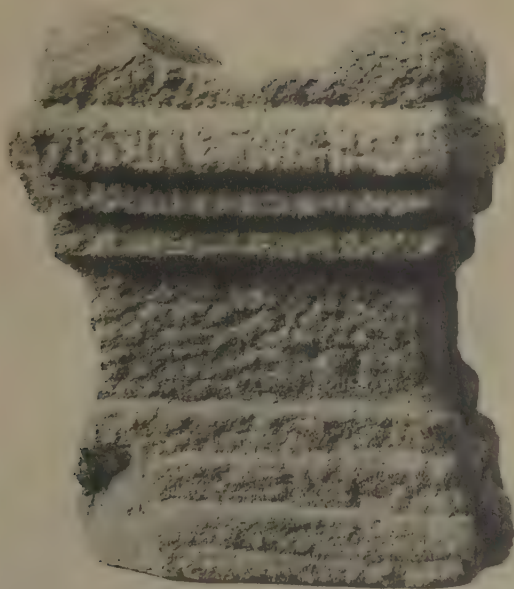


FIG. 1. SECTIONS OF FLOORS TO ROOM 5, BLOCK B,  
LOOKING S.  
*a*, lower sand floor. *b*, *b*, cement floor.  
*c*, wall. (Page 11.)

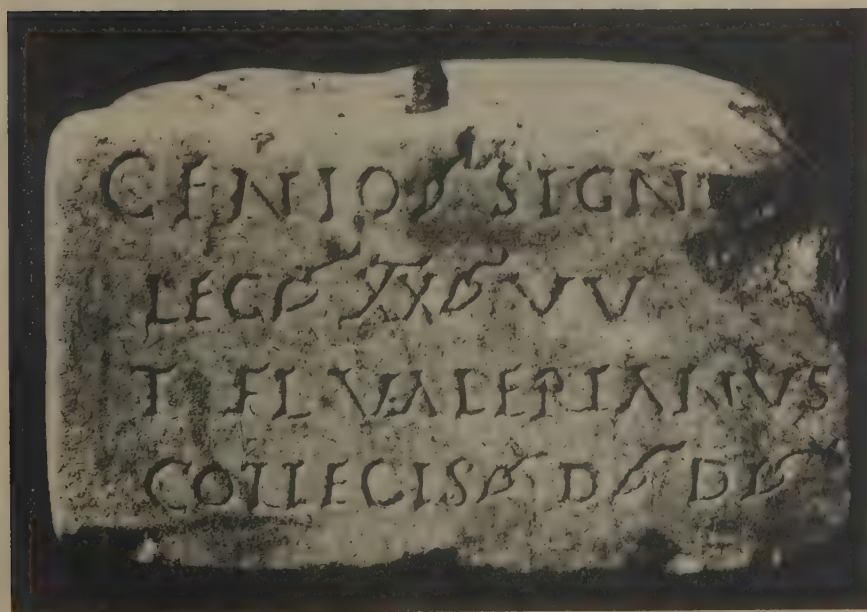


FIG. 2. POST STONES TO VERANDAH, BLOCK B,  
LOOKING S.  
*a*, lower sand floor. *b*, upper sand floor.  
*c*, post hole. (Page 13.)





1



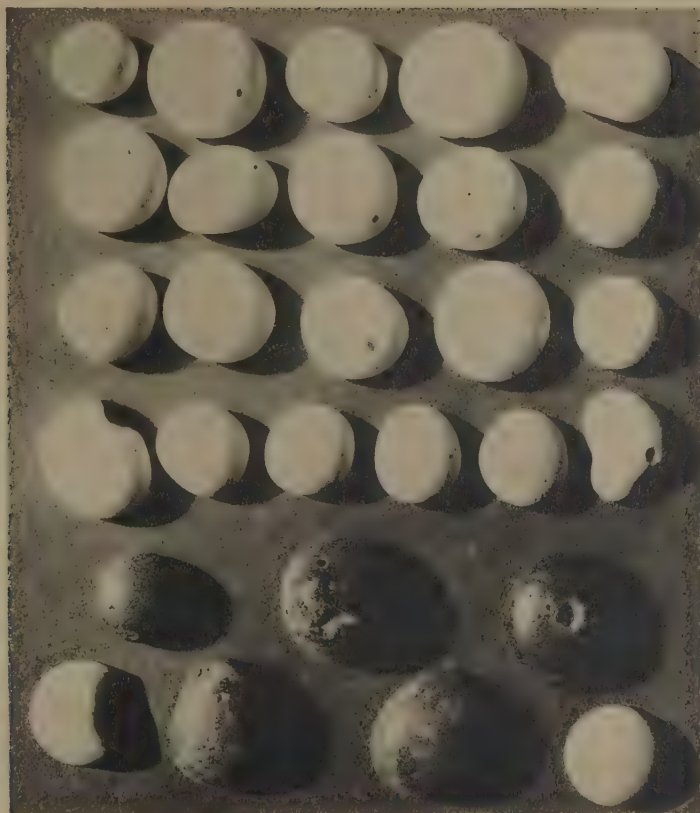
2

FIG. 1. UNINSCRIBED ALTAR. FIG. 2. INSCRIBED MARBLE TABLET.

(Pages 15, 16.)





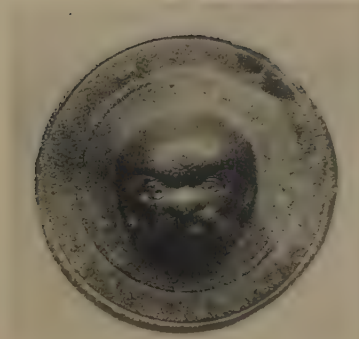


1



4

2



3

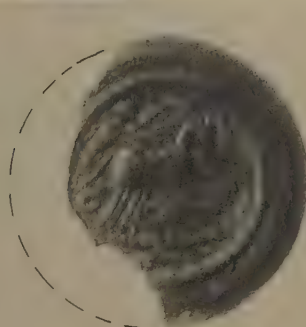


FIG. 1. SET OF COUNTERS, IN THREE COLOURS. Scale 1:1.

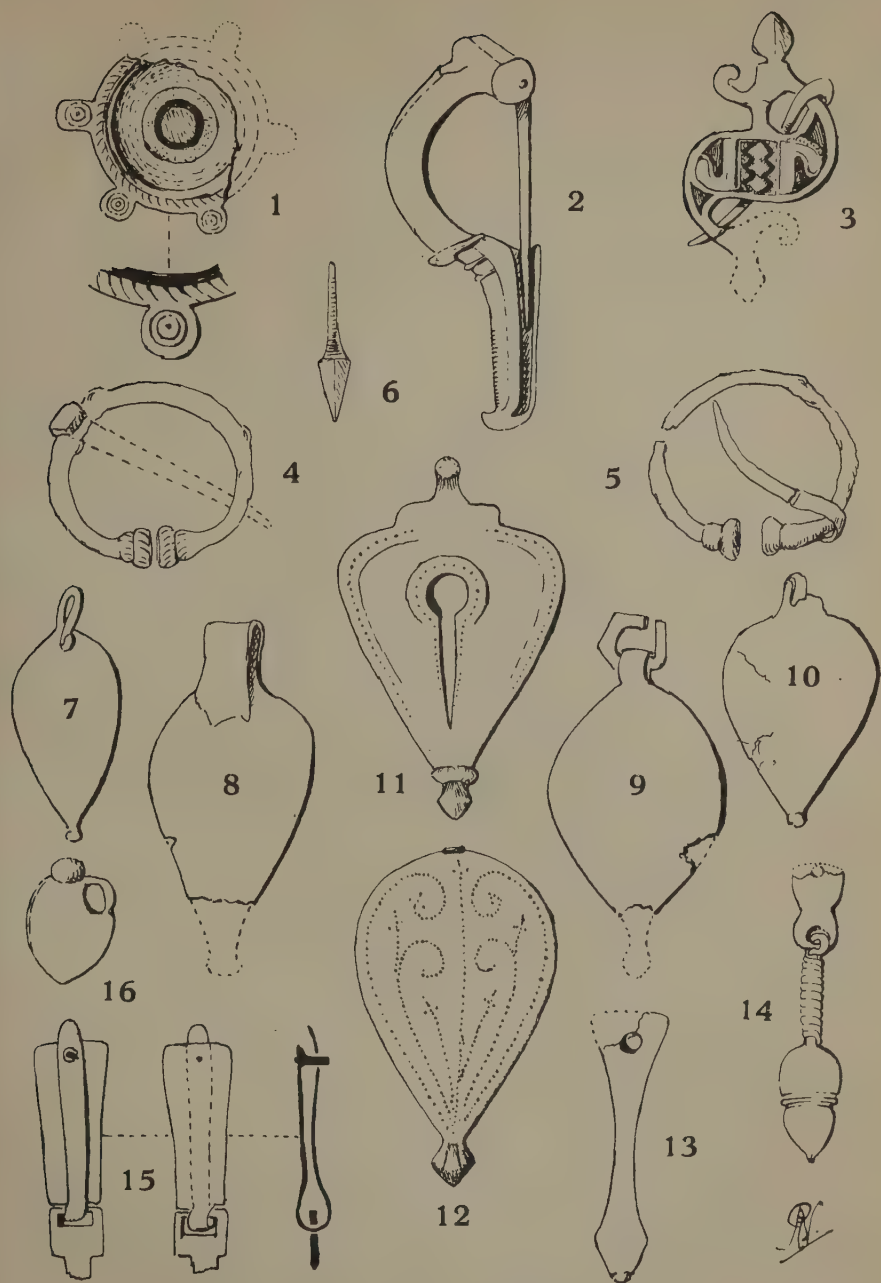
FIG. 2. BRONZE STUD, SLIGHTLY ENLARGED.

FIG. 3. STUD. Scale 9:4.

FIG. 4. BRONZE FINGER RING. Scale 9:4.

(Page 16.)



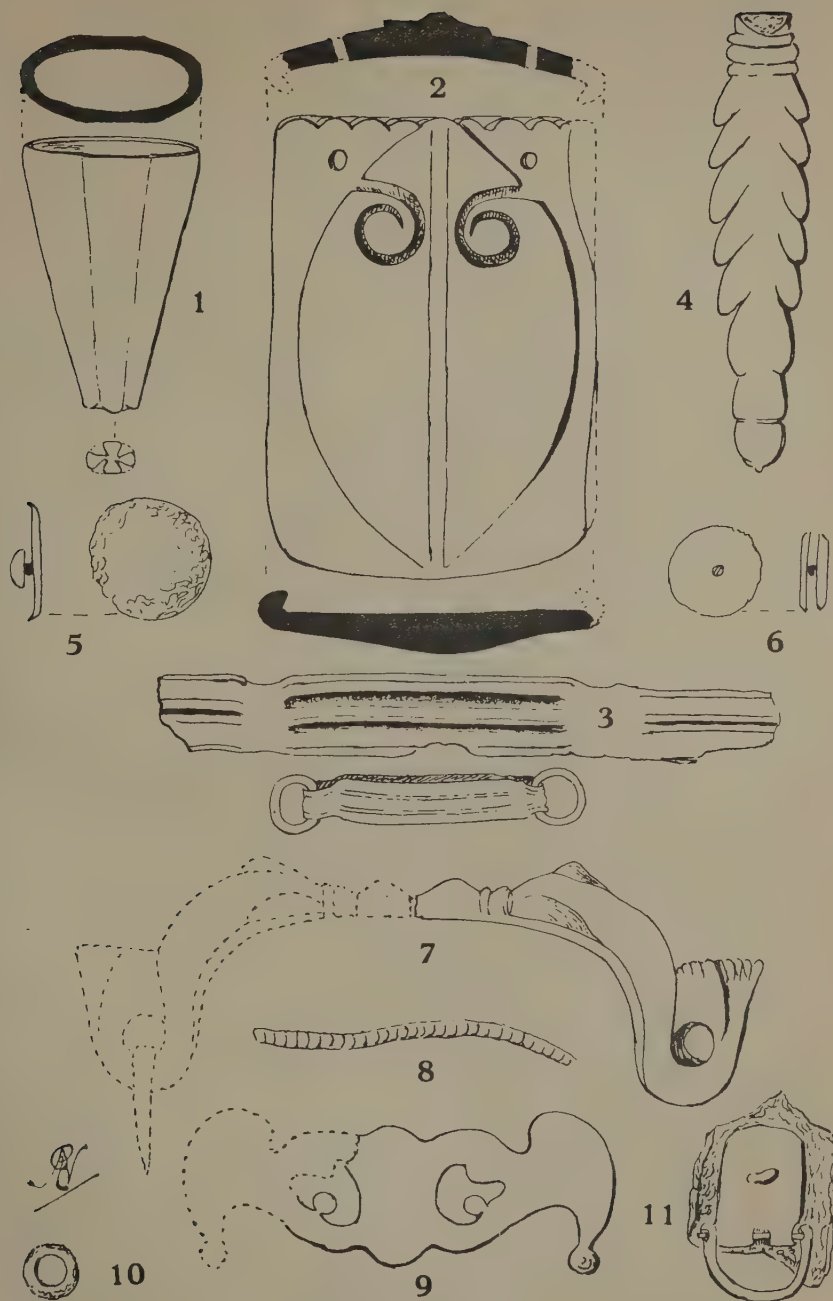


BRONZE PENDANTS AND BROOCHES.

Scale 1:1. (Page 17.)



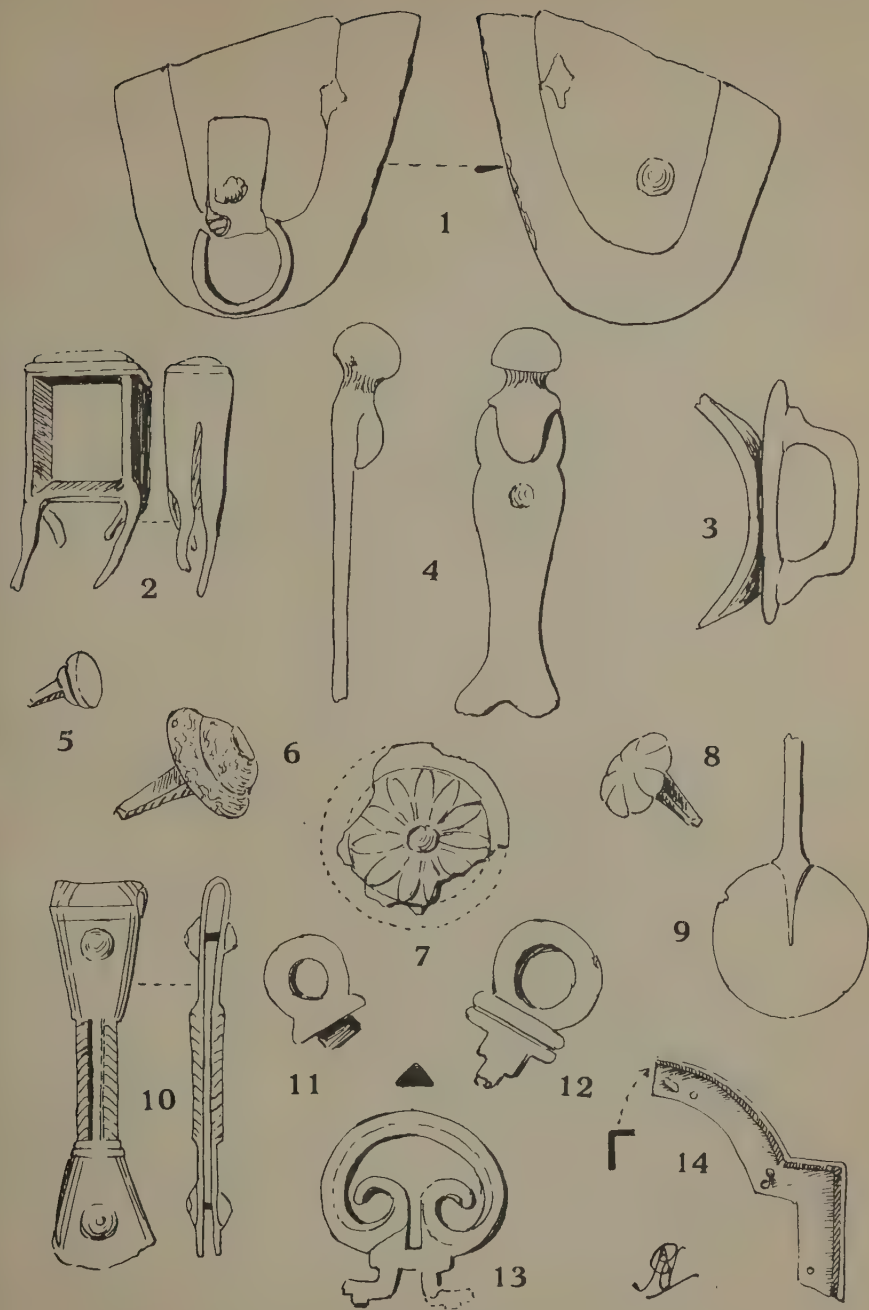




SWORD MOUNTINGS, ETC.

Scale 1:1. (Page 19.)





BRONZE FITTINGS, ETC.

Scale 1:1. (Page 20.)





1



2



3



FIG. 1. CRUCIBLES. Scale 1:4.

FIG. 3. BONE SPATULAE. Scale 3:8.

4



FIG. 2. LEADEN DISH. Scale 3:8.

FIG. 4. BALLISTA BALLS OF STONE. Scale 1:4.





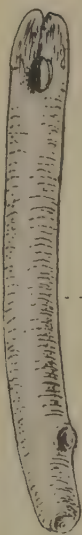
1



2



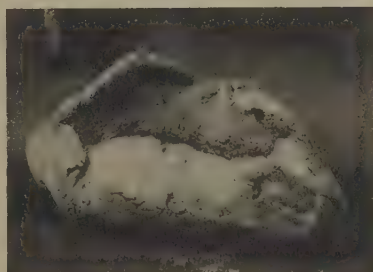
3



8



4



5



6



7

VARIOUS OBJECTS OF LEAD.

FIG. 1, Scale 1:1. FIGS. 2-7. Scale 1:2. (Page 22.)



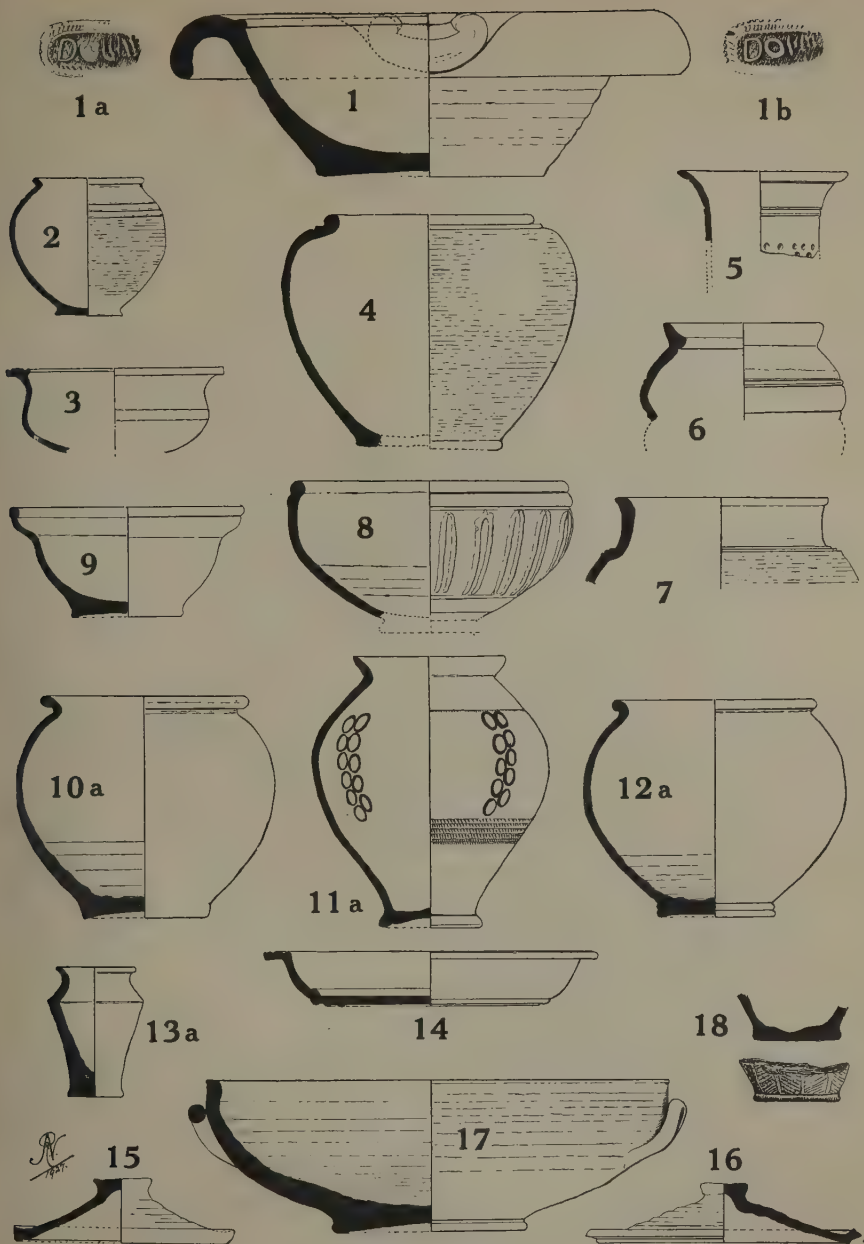




KNIVES, DAGGER SHEATHS, ETC.

Scale 1:2. (Page 23.)





COARSE POTTERY.

Scale 1:4. (Page 25.)





## TRIAL EXCAVATIONS AT LANCASTER

By J. P. DROOP AND R. NEWSTEAD, F.R.S.

WITH PLATE XIV

### I. THE 'WERY' WALL

THE 'Wery Wall,' called Roman in most accounts of Lancaster,<sup>1</sup> is a portion of the rough core of a wall from which all facing has disappeared so that it is not possible to determine its precise line. It is to be seen running downhill for a length of 10 feet from the outer, E, angle of a wall that is carried round the east side of the Castle Hill. It is preserved to a height of nearly 7 feet from the ground, and over it and against its end is built a cross wall running downhill eastwards. The northern side of the same portion is to be seen on the north side of this cross wall in a piece of ground belonging to and entered from the house in Bridge Lane that has 'Keep Thyself Pure' over the door.

The Corporation of Lancaster at the request of Alderman J. R. Nuttall, Mr. T. Cann Hughes, and Mr. Bland, the Librarian of the Storey Institute, kindly supplied two labourers and the necessary tools on October 3 and 4, 1927.

Work was begun on the portion north of the cross wall. A hole was dug at the northern end of the wall in the hope of finding its footing at a lower level, but it soon appeared that there was nothing below the level of the extant core but yellow clay, locally called 'marl,' containing small boulders.

The face of the core in this section had had a modern wall built against it as a support, hiding it completely, but a stake driven in under this in three places showed that there was nothing underneath but similar clay.

A piece of stone was found with mortar adhering. This mortar though pinkish and showing a certain number of fragments of pounded tile, proved to be of a type different from that found in the wall itself.

Next the southern face was investigated.

---

1. Cf. W. T. Watkin, *Roman Lancashire*, pp. 167, 168.

A modern wall has been built to support a terrace of earth parallel to the wall round the Castle Hill, and the north end of this terrace wall abuts on the cross wall that is built over the core just where the core comes to an end.

Thus the portion cleared was between these two parallel walls (which run N.-S.) a distance of just over 9 feet.

Just below the ground level of the terrace a projecting footing appeared. This projected some 10 inches at the west end, but the projection became less and less until the footing became flush with the upper part at 5 feet from the west end, and thereafter appeared to run under the upper part, but it is possible that this eastern portion had been broken away.

As stated above the direction of the wall could not be fixed, but there was a suggestion of a line curving to the north.

The main upper part of the core rising to 7 feet above the footing in the middle part consisted of irregular stones of various sizes, some with greatest measurements of 1 foot to 1 foot 6 inches, bound with mortar in which rare bits of tile were to be seen.

The upper layer of the footing also consists of largish rough stones (largest measurement 1 foot) arranged as rude headers and held with mortar. These form a course 10 inches thick (from top of core 7 feet to 7 feet 10 inches). Below is a course of small cobbles down to the level of 8 feet 1 inch. Then comes a packing of yellow clay to the level of 8 feet 6 inches, below which is a second layer of cobbles down to the level 8 feet 9 inches from the top of the core at its highest point in the centre. These levels were taken at 5 feet from west end. At the west end the levels are slightly higher, the footing beginning at 6 feet 6 inches from the highest point in the centre, so that the courses slope very slightly downwards to the east.

Below the cobbles was a layer varying in thickness from 3 to 5 inches of bluish clay with a plentiful admixture of charcoal in small fragments. The bluish colour may be due to the presence of fine wood ashes.

Below this came the yellow clay locally called 'marl,' with small boulders in it. This was dug out to a depth of 13 inches without any change being observable.

The blue clay appeared to extend southwards away from the wall. It and the underlying yellow clay sloped downwards away from the wall, so that at a distance of about 18 inches from the wall the modern earth filling was found at the same depth as the clay immediately under the wall.

At the west end close to the modern wall running N.-S., the top inch of the underlying yellow clay was burnt to a ferruginous colour, and traces of this burnt level were found extending southwards.

At the level of the blue clay just east of where it broke off at 6 feet from the west end, several broken pieces of wall plaster with a definitely smoothed face were found under the wall. These were white with no trace of colour. With these were also some bits of a cement floor (*Opus signinum*).

In the top level of the blue clay 8 feet 11 inches from the top of the wall, and 5 feet 1 inch from the face of the modern N.-S. wall at the west end lay a piece of thick-walled, undecorated 'Samian' ware. This was 2 inches below the lowest course of cobbles and in the same vertical plane as the outer edges of the cobbles.

Found in the dug soil :—

Almost touching the footing 1 foot 6 inches from the west end, 8 feet 6 inches below the highest point of the core, *i.e.* 2 feet below the beginning of the footing, and therefore below the lowest course of cobbles, was found a denarius of Nero :—

*Obv.* [IMP N]ERO CAESAR AVG P[P]. Head of Nero, laureate, r. with beard.

*Rev.* Salus, draped, seated l. on ornamented throne, holding patera in r. hand and resting l. hand on side. SA LV[S] left and right in field.

Cohen 320.

Mattingly and Sydenham (*Roman Imp. Coinage*, p. 143) fix the 'undated gold and silver coins of Nero,' A.D. 64-68.

It was found just where the yellow clay shows signs of burning, and indeed the coin appeared to show traces of heat on the reverse, and is otherwise in worn condition. With it was a piece of rim of a fumed grey flanged dish with straight sloping sides.

A small piece of coal was found in the yellow clay and two oyster shells below the footing of the wall.

Further east, some 7 feet from west end, well in the yellow clay which adhered to it, was found a small fragment of *terra sigillata* from the upper portion of a cylindrical bowl (Form 30), with bead-row below the ovolo border. The glaze and general technique is good, and the fabric is probably that of Lezoux. Oswald and Pryce (xx, 85) figure an almost exact parallel to the ovolo, by the potter Cobnertus, whose period of activity may be given as A.D. 75-110.



The full length of the core on the curve above the footing 6 feet from its top was 10 feet 6 inches.

The length along the slant of the footing between the two walls running N.-S. was 9 feet 2 inches.

The face of the core which at the west end has been repointed has a slight batter, a plumb line touching the edge of the footing being  $24\frac{1}{2}$  inches away from the highest part, and  $10\frac{1}{2}$  inches away from the lowest part of the core above the footing.

A crowbar was driven into the yellow clay under the wall at an angle of about 40 degrees to a depth of 13 inches, and met with no resistance.

The conclusion would seem to be that the blue clay level<sup>1</sup> was an occupation level in Roman times; and that there is a strong probability that the 'Wery Wall,' though apparently very carelessly built with a footing merely resting on clay, is Roman, to be dated perhaps to the early second century. This date may be arrived at by allowing a reasonable interval after the first Roman occupation of Lancaster for a plastered wall to have its surface fall off. That first occupation is believed to have been by Agricola in the 'seventies of the first century. The coin of Nero and still more, as less durable in use than the coin, the 'Samian' sherd of late Flavian date are indications that on the whole the date of the wall—if we assume that these objects got there when the wall was being built—is early in the occupation rather than late.

The fact that the interval between the two cobble courses of the footing is packed with the yellow clay, and that there is no perceptible interval between the occupation level and the bottom course suggests strongly that the above assumption is correct.

The earth of the terrace before the clay level was reached, which earth must have been put there when the supporting wall was built, yielded, besides modern potsherds and glass fragments, a few potsherds of eighteenth and perhaps seventeenth century slip ware.

## II. TRENCHES IN THE VICARAGE FIELD

Three trenches were cut in the Vicarage Field on the 7th, 8th, and 9th of November.

---

1. West in his *Guide to the Lakes*, quoted by Watkin, *loc. cit.*, p. 167, says that blue clay was always found under the foundation stones of other portions of this wall which still existed in the eighteenth century.

## 1. OUTER RAMPART AND DITCH

The first trench was cut at a point just to the west of the apparent entrance through the defences in the middle of the field to which a track seems to lead up from the north. It was cut in a south-westerly direction (angle  $233^{\circ}$  Mag.) for a length of 9·10 m. through a small outer rampart hereafter called the First Rampart), through a ditch inside the First Rampart, and into but not through an inner larger rampart (hereafter called the Second Rampart).

The measurements were :—

From the outer base of the First Rampart to its outer top edge . . . . .	2·10 m.
From the same point to the inner top edge of the First Rampart on the outer edge of the ditch . . . . .	5·60 m.
From the same point to the lowest point of the ditch . . . . .	6·50 m.
From the same point to the inner edge of the ditch . . . . .	7·70 m.

The ditch, which thus had a width of 2·10 m., proved to have a V-shaped section at the bottom where it was cut to a depth of about ·50 m. into the virgin soil, a boulder clay locally called 'marl' of reddish colour, with which the black clay filling of the ditch was in strong contrast. This showed the arrangement of ramparts and ditch to be definitely artificial, and the Roman potsherds found at all levels in this trench proved that it was of Roman construction.

## 2. A ROAD

The second trench was cut on the plateau, very near the south-east corner of the field, by the church. This cut revealed the presence of a road 26 feet 9 inches wide. The metalling of this consisted chiefly of cobble-stones or boulders set in well-puddled clay, varying in thickness from 1 foot 6 inches to 1 foot 4 inches. There was a shallow depression on the western fringe of the metalling, and a well-defined channel on the opposite side. In section the latter was like a truncated cone inverted ; it was cut in the natural 'marl' or clay, and was 1 foot 11 inches deep, 2 feet 8 inches wide at the top, and 2 feet 2 inches at the bottom. This section of the road seems to be in alignment with the apparent roadway which passes through the northern ramparts and into the fields beyond the fort.

The dating of the road is not easy, owing to the mixed or disturbed nature of the finds. But one fragment of pottery found in the metalling dates back to the closing years of the first or the first quarter of the second century. The majority of the dateable finds belong to a much later date.

### 3. SOUTH-EAST ANGLE (?) OF SECOND RAMPART

The third trench, a very short one, was made in the second rampart at a point close up to Vicar's Lane at the east end of the field. Here a distinct outcrop was to be seen of small, roughly squared stones lying more or less in alignment, and passing somewhat obliquely across the rampart. These proved to belong to a stone revetment, facing about north-east. A section of this, measuring 9 feet long, was laid bare to a depth of nearly 4 feet 6 inches. The courses of roughly faced rock varied between 4 inches and 11 inches, and they were bedded in puddled clay and laid with a slight batter.

There was an infilling of blackish earth in front of the stone revetment in which were found a group of stone roofing slabs, mostly broken, and some fragments of early English pottery. Pottery of a similar type and period also occurred below the group of roofing slabs at the 3 feet 6 inch level. One fragment of a Roman mortarium was found below the first course of masonry in the revetment, but the structure at that level showed evident signs of having been disturbed; and the finding of this shard in its composition at that point cannot be taken altogether as a proof of its Roman origin.

## III. THE FINDS

### (a) *Pottery*

The section cut through the First Rampart and ditch contained some fragments of pottery at all levels, none of which seems to be earlier than the reign of Pius; the earthworks may, therefore, have been constructed some time during the latter half of the second century. On the other hand the evidence of the pottery found in the cut through the road, within the camp, points to a late first or early second century occupation.

### Pieces shown in Plate XIV

1. Side fragment of the shallow dish, form 18 or 18/31. This is from a small example, possibly a true 18, but it is badly worn and the glaze almost gone. Road.

2. Fragment from upper portion of bowl, form 37. Bead-row below the ovolo border, with part of caduceus ornament. Cf. Walters, M. 1319, *Roman Pottery, Brit. Museum*. Probably Lezoux fabric. Latter half of second century. Road.

3. Form 37. Fragment showing part of frieze or border of spiral ornament, below a simple line. This form of decoration was sometimes used by Lezoux potters. Cf. Walters, M. 1200 and 1462. But the employment of this motif in series, as in the Lancaster piece, recalls the work of East Gaulish potters. Cf. Oswald and Pryce, p. 31. Date probably latter half of second century. First Rampart.

4. Form 37. A small and badly worn fragment showing upper portion of nude female to l. (not in Déchelette). Latter half of second century. Road.

5. Fragment from shoulder of large cooking-pot of hard fumed grey ware. Decoration: part of an irregular vertical ridge, applied *en barbotine*, and above it a very narrow cordon. Not later than mid second century. Cf. Bushe-Fox, *Wroxeter*, 1913, p. 49. Road.

6. Fragment of small beaker decorated with transverse rows of large, impressed leaf or flower buds. Hard pinkish clay coated with pale red slip. This is an exceptional piece for which we have been unable to find an exact parallel. Road.

7. Fragment of beaker in white clay coated with dull blackish slip, and decorated *en barbotine* with part of leaf stalk or scroll in white slip, possibly of German origin. Cf. May, *Silchester*, p. 104, Pl. XLII A. Road.

8. Fragment of small thin-walled beaker. Hard pinkish clay, coated inside with brown, and outside with cream-coloured slip. The whole of its surface is covered with roulette-notching. Possibly of the same provenance as No. 6. Date uncertain, but probably late. First Rampart.

#### Pieces shown in Fig. 1

1. Mortarium. Brick-red clay. Beaded rim set much below the flange. This seems to be a variant of Woodward's No. 2 from Ilkley (*York. Arch. Jour.*, XXVIII, p. 261) dated not later than mid second century. Road.

2. Mortarium. Hard white clay, coated with buff-pink slip. Upper surface of flange with two fine grooves. Spout formed by turning down the strongly beaded rim. Diameter of flange *ca.* 10 inches. This is a close parallel of Woodward's No. 8 (*l.c.*, p. 262) from Ilkley (undated) and

near Bushe-Fox's form 134. Belongs probably to the later period of the occupation. Road.

3. Fragment of flange of mortarium in soft red clay, with part of graffito (N.) scratched or cut in the clay before baking. Date probably second century. Road.

4. Dish with oblique straight side, heavy flange, and thick rim. Fumed grey ware burnished. Not before the end of the second century, possibly much later. Cf. Woodward, *Ilkley, l.c.*, Group III a, p. 269; Bushe-Fox, *Richborough*, Nos. 121, 122, p. 104, there dated mid fourth and fourth century respectively. Road.

5. Pot with tall oblique rim, slightly hollowed on its upper edge. Hard fumed grey ware, burnt red in places. Although this example contains

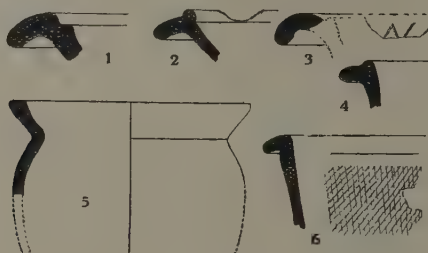


Fig. 1.

no white grit in its clay body, it seems to belong to the latest form of cooking-pots. But cf. Woodward, *Ilkley, l.c.*, No. 28, XXXIV. Road.

6. Dish with oblique straight side, and thick flat rim; decorated with exceptionally small latticed lines. It belongs to the same class of vessels as No. 4, and like the latter it seems also to have had a long life. First Rampart.

#### (b) *Glass*

Five fragments of blue glass belonging to a square-sided bottle with reeded handle were found lying together on the surface of the road, and near by them another fragment of blue belonging to a thick-walled flask.

#### (c) *Metal*

A circular bronze stud with a portion of the iron pin for attachment to a girdle or strap, was found in the cut through the First Rampart. It has a nipple-like centre, with a deep concentric groove, and half-round bezel.





LANCASTER. ROMAN POTTERY.



# APOLLONIUS ὁ εἰδογράφος

By M. M. GILLIES

BEFORE the publication in 1914 of the Oxyrhynchus *Chrestomathy*,<sup>1</sup> Apollonius ὁ εἰδογράφος was known to scholarship only as a classifier of some shrewdness (εὐφυΐς) in the Alexandrine Library,<sup>2</sup> and in particular as having assigned to its present class the second Pythian Ode of Pindar.<sup>3</sup> But the *Chrestomathy* has not only established Apollonius ὁ 'Ρόδιος in his proper place as predecessor of Eratosthenes, confirmed the suspicions of those who on other grounds had doubted the appointment of Callimachus,<sup>4</sup> and given the name of the military officer<sup>5</sup> who succeeded Aristarchus, presumably on the dispersal of the Alexandrine scholars under Euergetes II<sup>6</sup>; it has also raised the Eidographer to the rank of Librarian, and placed him almost certainly as successor of Aristophanes of Byzantium, and quite definitely as predecessor of Aristarchus of Samothrace.<sup>7</sup> It is now possible to confirm this appointment from another source, and to provide Apollonius with a distinguished pupil as a nucleus of his school.

The confirmation depends on the proper assignation and restoration of a vexed passage in Suidas, s.v. 'Αριστώνυμος· κωμικός. τῶν δραμάτων αὐτοῦ ἐστὶν "Ἥλιος ῥιγῶν, ὡς 'Αθηναῖος ἐν Δειπνοσοφισταῖς. βασιλευντος Πτολεμαίου τοῦ Φιλαδέλφου καὶ τοῦ μετ' αὐτὸν τοῦ Φιλοπάτορος. καὶ προέστη τῆς τοῦ βασιλέως βιβλιοθήκης μετ' 'Απολλώνιον, ἔτος ἄγων ξδ'. ἰδιασκευασθεὶς δὲ ὡς βουλόμενος πρὸς Εὐμενῇ φυγεῖν, ἐφυλάχθη ἐν εἰρκτῇ χρόνον τινά. ἠφείθη δέ, καὶ ὑπὸ στραγγουρίας

1. *Ox. Pap.*, 10. 1241, p. 102.

2. *Et. Mag.*, ed. Gaisford, 295. 52, s.v. εἰδογράφος· 'Απολλών(ιος) εἰδογράφος, ἐπειδὴ εὐφυΐς ὢν ἐν τῇ βιβλιοθήκῃ τὰ εἶδη τοῖς εἶδεσιν ἐπένειμεν, κ.τ.λ.

3. Schol. Pind. *Pyth.* 2, ad. init. (ed. Drachmann, Vol. 2, p. 31, 10-14) οἱ μὲν γὰρ οὐδὲ ὅλως ἐπὶ τὸν αὐτὸν εἶναι φασί. . . ἔνιοι Πυθικὴν, ὡς 'Απολλώνιος ὁ εἰδογράφος.

4. *V.* especially Callimachus, ed. A. W. Mair (Loeb Library, 1921), Intr., pp. 6-11.

5. *Ox. Pap.*, 1241, Κυδὰς ἐκ τῶν λοχσοφῶρων.

6. Athenaeus, 4. 184 C.

7. *Ox. Pap.*, 1241. Ερατοσθένης μετ' ὃν Ἀριστοφάνης Ἀπελλοῦ Βυζαντίου (καὶ Ἀριστάρχου)· εἰτ' Ἀπολλώνιος Ἀλεξανδρεὺς ὁ εἰδογράφος καλούμενος· μετ' ὃν Ἀριστάρχος Ἀριστάρχου Ἀλεξανδρεὺς ἀνωθεν δὲ Σαμοθράξ. Omit, with the editors, the words in brackets; they are probably a careless insertion, due to the perpetual association in scholastic circles of Aristophanes and Aristarchus.

τελευτῶ, ἔτη βεβιωκὼς ος' (77). συγγράμματα δὲ αὐτοῦ πᾶνυ πολλά. This attribution to Aristonymus of the "Ἥλιος ῥιγῶν is confirmed by Athenaeus,<sup>1</sup> who elsewhere mentions his only other known play,<sup>2</sup> the *Θησεύς*; but a Ptolemaic date, the office of Librarian, and an intrigue with Eumenes are obviously incompatible with the reputed contemporary of the comic poets Aristophanes and Ameipsias.<sup>3</sup> The section βασιλεύοντος —πολλά is dated by the mention of Eumenes, who was King of Pergamum, 197-159; but there is an historical error in the succession of Philadelphus (285/3-245) by Philopator (221-203), apart altogether from the incongruity of a date in the third century. It may well be that Φιλαδέλφου, with the curious variant of B. and E. φιλοσόφου, has replaced the less familiar Πτολεμαίου τοῦ Ἀδελφοῦ,<sup>4</sup> with Φιλοπάτορος for Φιλομήτορος as an obvious but stupid correction to bring the dates more into line. The retirement of Antiochus from Egypt in 169 left Philometor as king in Memphis, and his younger brother, Ptolemy 'The Brother' (later Euergetes II), as king in Alexandria; in 168, these combined in a joint rule,<sup>5</sup> till in 163, as a result of Philometor's embassy to Rome, the decision of the Senate established 'The Brother' as King of Cyrene, and Philometor as King of Egypt and Cyprus. This position Philometor held till his death in 145.

There is a parallel error in the passage of the *Chrestomathy* which deals with Aristarchus: μεθ' ον Αριστάρχος Αριστάρχου Αλεξανδρεὺς ἀνωθεν δε Σαμοθραξ· οὗτος καὶ διδ(α)σκαλὸς (ε)γενε(το) τῶν τοῦ Φιλοπατορος τεκνῶν. Grenfell and Hunt *ad loc.* have suggested that 'Φιλοπατορος is an error either for Επιφανους or Φιλομητορος . . . Φιλομητορος is palaeographically the easier correction, Επιφανους will better suit the plural τεκνῶν, for it is likely enough . . . that Aristarchus taught Philometor as well as his brother Euergetes.' But Philometor as well as Epiphanes had two sons. The elder,<sup>6</sup> Ptolemy Eupator, was associated with his father as joint King in 153-2, and, though he died about three years later, appears none the less in the list of deified Kings; the younger

1. Athenaeus, 7. 284 F, 287 C.

2. *Ib.*, 3. 87 A, Kock 1. 668.

3. *Vita Aristophanis*; διδ καὶ ἔσκαπτον αὐτὸν Ἀριστάννυμος τε καὶ Ἀμειψίας, τετράδι λέγοντες γεγονέναι. (*Acharnians*, ed. Rogers, Appendix, p. v.)

Schol. Plat. *Apol.* (Bekker, p. 331); Ἀριστάννυμος δ' ἐν Ἠλίῳ ῥιγούνη καὶ Σαννυρίων ἐν Γέλωτι τετράδι φασὶν αὐτὸν γενέσθαι (*ib.*, p. ix.).

4. For historical details, v. E. Bevan, *History of Egypt under the Ptolemaic Dynasty* (1927), pp. 285 ff.

5. Cf. Polybius, 29. 23. 9.

6. Bevan, *op. cit.*, p. 292.

was murdered by Euergetes II<sup>1</sup> at the beginning of the latter's reign—according to Justin's account, 'assassinated in the arms of his mother at the wedding feast.'

Reference to Suidas, s.v. 'Αρίσταρχος further clarifies the situation : γέγονε δὲ κατὰ τὴν ρησὶ 'Ολυμπιάδα (i.e. 156=B.C. 156-153) ἐπὶ Πτολεμαίου τοῦ Φιλομήτορος (King 181-145) οὗ καὶ τὸν υἱὸν<sup>2</sup> ἐπαίδευσεν. λέγεται δὲ γράφαι ὑπὲρ ὧ (i.e. 800) βιβλία ὑπομνημάτων μόνον. μαθητὴς δὲ γέγονε 'Αριστοφάνους τοῦ γραμματικοῦ, καὶ Κράττη τῷ γραμματικῷ πλείστα διημιλλήσατο ἐν Περγάμῳ, μαθηταὶ δὲ αὐτοῦ ὑπὲρ τοὺς μ' (i.e. 40) ἐγένοντο· τελευτᾷ δ' ἐν Κύπρῳ, ἐαυτὸν ὑπεξαγαγὼν ἐνδείξαι τροφῆς, νόσφ' τῇ ὕδρωπι ληφθεὶς. ἔτη δ' αὐτοῦ τῆς ζωῆς οβ' (i.e. 72). The correspondence with the entry s.v. 'Αριστώνυμος is too striking to be ignored, or to permit reference of the latter to Aristophanes of Byzantium even in terms of the false chronology of Suidas, whereby the predecessor of Aristophanes was Apollonius Rhodius. The *floruit* of Aristarchus under Philometor, and of the other under 'The Brother' and his colleague and successor Philometor : the education by Aristarchus of the son of the King, and the appointment of the other as Royal Librarian : the activities of Aristarchus in Pergamum, and the imprisonment of the other under suspicion of attempted flight to Eumenes, along with his appointment as successor of Apollonius at the late age of sixty-four ; the ὑπομνήματα of Aristarchus, and the συγγράμματα of the other<sup>3</sup> ; the suicide of Aristarchus from dropsy, and the death of the other from strangury<sup>4</sup> ; the similarity of the ages at death, seventy-two for Aristarchus and seventy-seven for the other ; the death of Aristarchus in Cyprus, and the expulsion of the scholars under Euergetes II<sup>5</sup>—these leave little room for doubt that the greater part of the entry s.v. 'Αριστώνυμος refers properly to Aristarchus, and that it is a complementary account, possibly from other sources, of the life of the great grammarian. It is easy enough to understand how it should have become misplaced. Assume the *wrong* Apol-

1. *Ib.*, p. 307, note 1, where he is tentatively identified with the Νέος Φιλοπάτωρ who appears in later lists.

2. *I.e.* (probably) Eupator, whose association with Philometor as joint King must have practically coincided with the appointment of Aristarchus as Librarian.

3. Didymus on *Il.*, 16. 111, definitely distinguished the συγγράμματα of Aristarchus from the ὑπομνήματα, and considered the former of greater value.

4. A minor difference, esp. in non-scientific tradition. *Strangury* is retention of the urine, when it falls by drops, *dropsy* a symptom of kidney disease, where there is obstruction to the watery and saline constituents of the urine, accompanied by a more or less free escape of albumen.

5. *V. supra*, p. 41, n. 6.



lonius,<sup>1</sup> tinker half-heartedly with the names of the kings to accord, reject the tradition of age at death as 77 because it contradicts the other,<sup>2</sup> and valuable information on Aristarchus is doomed to go astray.

Thus at one end there is the tradition of Eratosthenes surviving to the reign of the fifth Ptolemy,<sup>3</sup> *i.e.* Epiphanes, 203-181, and being succeeded by his pupil Aristophanes of Byzantium<sup>4</sup>; at the other, there is the appointment at the age of 64 of Aristarchus, pupil of Aristophanes, as successor to Apollonius, and his death at the age of 72 or 77. That this Apollonius was ὁ εἰδογράφος, is clear from the *Chrestomathy*; and though the date of his appointment is quite uncertain, the main outlines are now clear enough:—

c. 217. Aristarchus born.

c. 197. Eratosthenes dies; Aristophanes (*floruit* 01. 145) becomes Librarian.

— Aristophanes dies; Apollonius ὁ εἰδογράφος succeeds.

c. 153. Apollonius dies; Aristarchus succeeds, aged 64.

c. 145. Aristarchus, aged 72, succeeded by Cydas.

c. 140. Aristarchus dies, aged 77.

Suidas is likewise the authority for the only known pupil of Apollonius,<sup>5</sup> *s.v.* Ἀσκληπιάδης· Διοτίμου, Μυρλεανὸς (πόλις δὲ ἔστι Βιθυνίας, ἡ νῦν Ἀπάμεια καλουμένη) τὸ δὲ ἄνωθεν γένος ἦν Νικαεὺς· Γραμματικός, μαθητὴς Ἀπολλωνίου. Γέγονε δὲ ἐπὶ τοῦ Αττάλου καὶ Εὐμενοῦς τῶν ἐν Περγάμῃ βασιλέων. ἔγραψε φιλοσόφων βιβλία διορθωτικά. ἐπαίδευσεν δὲ καὶ εἰς Ῥώμῃ ἐπὶ Πομπηίου τοῦ μεγάλου, καὶ ἐν Ἀλεξανδρείᾳ ἐπὶ τοῦ δὲ Πτολεμαίου νέος διέτριψεν. ἔγραψε πολλά. Confusion with the Rhodian has caused this account to be misinterpreted, and the inconvenient association with Apollonius to be passed over in silence; Pauly,<sup>6</sup> for example, by intricate subdivisions finds references to

1. Whom Suidas has himself misdated, *s.v.* Ἀπολλώνιος . . . διάδοχος γενόμενος Ἐρατοσθένους ἐν τῇ προστασίᾳ τῆς ἐν Ἀλεξανδρείᾳ βιβλιοθήκης.

2. If these figures can be trusted, although they are reversed in Suidas, the original tradition was probably seventy-two on retirement from Alexandria, seventy-seven at death, presumably in Cyprus.

3. Suidas, *s.v.* Ἐρατοσθένης . . . μετεπέμψθη δὲ ἐξ Ἀθηνῶν ὑπὸ τοῦ τρίτου Πτολεμαίου καὶ διέτριψε μέχρι τοῦ πεμπτῶ . . . ἐτελεύτησεν . . . μαθητὴν ἐπίσημον καταλιπὼν Ἀριστοφάνην τὸν Βυζάντιον, οὗ πάλιν Ἀρίσταρχος μαθητής.

4. *Chrestomathy*, *loc. cit.*

5. Suidas, ed. Gaisford, p. 607, B<sup>2</sup>—C<sup>2</sup>.

6. *Real-Lexikon* *s.v.*; he assigns to A. of Myrleia Ἀσκληπιάδης—γραμματικός καὶ ἐπαίδευσεν—μεγάλον: to A. of Alexandria καὶ ἐν Ἀλεξανδρείᾳ—πολλά: to some unknown Asclepiades γέγονε—διορθωτικά.

no less than three persons of the name Asclepiades, but leaves out of consideration altogether the key-words *μαθητῆς Ἀπολλωνίου*.

But two, not three, distinct entries have been condensed under a single heading, and only a single division need be made, *i.e.* after *διορθωτικά*. The contemporary of Attalus (241-197) and Eumenes (197-159) can hardly have been a pupil of the Rhodian Apollonius who tutored Ptolemy Euergetes I (247-221), though he may well have attached himself to the *εἰδογράφος*:—whether before or after the appointment of the latter as successor of Aristophanes, it is impossible to determine. But the same person cannot have set up a school at Rome in the time of Pompey the Great (106-48); and Gaisford,<sup>1</sup> was not far from the truth in proposing *ή* or *θ* in place of *δ*: *θ* (*i.e.* 9) is the easier and likelier restoration, and would establish the person referred to in this section as a youth in Alexandria at the time when Ammonius and his other great colleagues were in their prime.<sup>2</sup>

It is difficult to understand the objections of Susemihl and others<sup>3</sup> to Müller's proposal<sup>4</sup> to assume the existence of two scholars, both of the name Asclepiades, and both from Myrleia. *Ἀσκληπιάδης Τραγιλεύς*,<sup>5</sup> author of the *Τραγωδούμενα*, can be ignored, since he is definitely dated<sup>6</sup> as a pupil of Isocrates and contemporary of Xenophon, Ephorus, and Theopompus. It is highly improbable<sup>7</sup> that a Greek grammarian should have opened a school in Spain in the times of Attalus and Eumenes; and it is significant that the author of the *περιήγησις τῶν ἔθνων τῶν ἐν τῇ Τουρδιτανίᾳ*, known only from two references in Strabo, is on both occasions called *Ἀσκληπιάδης ὁ Μυρλεανός*.<sup>8</sup> It may be that one Asclepiades came from Myrleia, later Apameia,<sup>9</sup> the other from Nikaia, formerly Antigoneia<sup>10</sup>; in any case these places tended to be confused.<sup>11</sup> The

1. Gaisford, *ad. loc.*, "repugnat enim vox νέος."

2. *Chrestomathy*, 17-21, ἐπὶ δὲ τῷ ἐνατῷ (βα)σίλει ηἰκμασαν Ἀμμω(ν)ιος καὶ Ζηνο(δοτος) καὶ Διο(κλ)ῆς καὶ Ἀπολλο(δ)ῶρος γραμ(μα)τικοί.

3. *Gesch. der gr. Litt. in der Alexandrinzeit*, Vol. II, p. 16, n. 85.

4. *F.H.G.*, Vol. III, pp. 298-299.

5. Steph. Byz., *s.v.* Τράγιλος· πῶς μὴ τῶν ἐπὶ Θράκης πρὸς τῇ Χερρονήσῳ καὶ Μακεδονίᾳ. Ἐκ ταύτης ἦν Ἀσκληπιάδης ὁ τὰ Τραγωδούμενα γράψας ἐν ἑξ βίβλοις. ὁ πολίτης Τραγιλεύς.

6. Plut., 10. Orat., p. 838. ἐμαθήτευσεν δ' αὐτῷ (sc. τῷ Ἰσοκράτει) καὶ Θεόπομπος ὁ Χίος καὶ Ἐφωρος ὁ Κυμαῖος καὶ Ἀσκληπιάδης ὁ τὰ Τραγωδούμενα συγγράψας καὶ Θεοδέκτης ὁ Φασιλήτης.

7. Müller, *op. cit.*, p. 298.

8. Strabo 3, pp. 157, 166; Müller, p. 301, *fragm.* 5, 6.

9. Steph. Byz., *s.v.* Μυρλεία· ὁ πολίτης Μυρλεανός, ὡς Ἀσκληπιάδης ὁ Μυρλεανός ἀναγράφεται.

10. *Ib.*, *s.v.* Νίκαια . . . ἐξ αὐτῆς . . . καὶ Ἀσκληπιάδης καὶ Παρθένιος.

11. Cf. Suidas, *s.v.* Παρθένιος. Νικαῖος ἢ Μυρλεανός, and n. 34 *supra*.

existence of an Ἀσκληπιάδης Μυρλεανός about the time of Pompey is further attested by references in Athenaeus<sup>1</sup> to his monograph περὶ τῆς Νεστορίδος, in which honourable mention is made, among others, of Dionysius Thrax and Promathidas.

As nothing more is known of these φιλοσόφων βιβλία διορθωτικά, Müller had no reason for confusing the issue by referring them to the philosopher Asclepiades of Phlius.<sup>2</sup> Bernhardt did the right thing long ago, in dividing the extract from Suidas at διορθωτικά, and assuming the absence of some such words as Ἀσκληπιάδης Μυρλεανός καὶ αὐτὸς γραμματικός.<sup>3</sup> We, in fuller knowledge of the Alexandrine Librarians, are able to identify Asclepiades *senior* of Myrleia, corrector of philosophical treatises, as the first known pupil of Apollonius ὁ εἰδογράφος, Librarian at Alexandria in the first half of the second century B.C.

---

1. P. 492 A, p. 489 A.

2. Müller, *op. cit.*, p. 298 : Diog. Laert. 6. 91 : cf. Cicero, *Tusc.*, 5. 39.

3. Susemihl, *op. cit.*, p. 16, n. 85.

## EXCAVATIONS AT WEST DERBY CASTLE, LIVERPOOL

By J. P. DROOP, M.A., AND F. C. LARKIN, F.R.C.S. ENG.

WITH PLATES XV-XXIV

THE site of the castle at West Derby lies in what is known as the Castle Field to the west of Croxteth Park, and is reached by Meadow Road, formerly known as Castle Lane, running NE. past the church and the Police Station from West Derby village, in which stands the old Manor Court House in good preservation.<sup>1</sup>

Little is known of the history of the castle. Below <sup>2</sup> is a list of books where that little may be found.

Investigation at this moment was prompted by a fear that building operations, though not at present contemplated on the Castle Field, might in the future jeopardise the chance of a properly-conducted excavation ; for building is already in progress beyond and to the west of the field, and the site has not been thought worthy of being scheduled under the Ancient Monuments Act of 1913, which, though not a final bar to building, at least procures delay. Without this safeguard it appeared advisable not to postpone the matter, and permission to dig was obtained from the owner of the land, Lord Sefton, and from the tenant, Mr. S. Lees, through the good offices of Lord Sefton's agent, Mr. T. W. Haward. The cordial thanks of the excavators is due to them for their courtesy and for the facilities afforded. Thanks are also due to the Corporation of Liverpool for the loan of tools.

---

1. Cf. sheet CVI. NE. of the 6 inch Ordnance Map.

2. *The Victoria History of the Counties of England. A History of the County of Lancaster*, Part 7, pp. 543-5.

Bennett and Elton, *History of Corn Milling*, Vol. IV, pp. 193 ff.

Ramsay Muir, *History of Liverpool*, p. 8.

Picton, *Memorials of Liverpool*, 2nd Ed. 1875, Vol. II, p. 418.

Baines, *History of the Commerce and Town of Liverpool*, 1852, pp. 67, 68, 121.

Muir and Platt, *History of Municipal Government in Liverpool*, 1926, pp. 2, 12, 38, n. 2.

Syers, *History of Everton*, 1830, p. 71.

Gregson, *Portfolio of Fragments*, 2nd Ed., pp. 144, 155.

The work, which was much interfered with by rain, occupied the last week in July 1927 and nearly the whole of August, and was conducted by Mr. F. C. Larkin, Professor Droop, Associate Professor J. A. Twemlow, and Mr. H. King, with the assistance of Messrs. Hilton, Morris, Moss, Tatham, and Thorpe, past and present students in the School of Geography of Liverpool University.

Although the site was levelled in 1817<sup>1</sup> the earth of the mound which was thrown into the ditches has settled in the course of years, so that from a little distance the line of both ditches, that round the motte and that round the bailey on the south side, can be easily made out, and is visible in Pl. XV b, one of several photographs kindly taken from the air, by the R.A.F. unit at Shotwick, whom it is desired to thank very warmly for their pains, and also Wing Commander A. T. Whitelock, R.A.F., through whom the matter was arranged.

For the plan of the ditch (Pl. XXI) thanks are due to the kindness and skill of Mr. F. H. Gough, a student in the School of Civil Engineering of Liverpool University, who made a special survey, though exigencies of space and scale prevented the reproduction of his actual drawing.

### THE DITCHES

A trench 15 m. long and rather more than 1 m. wide was first cut across the ditch, apparently some 12 m. wide, dividing the bailey from the motte (Pl. XXI A). At either end the virgin soil, sand on the top of boulder clay, was quickly reached at a depth of .35 m. (Pl. XXII, above). Untouched boulder clay was also found at the same depth below the surface in the apparent middle of the ditch, thus explaining a slight hump in the surface soil which was visible there. Thus the inner ditch proved to be two, averaging 4 m. wide at the top and separated by 3 m. of bank.

Both ditches had been dug in the boulder clay to the same depth, which in the ditch next the motte was 1 m. and in the other 1.25 m. below the present surface. The bottom portion of the ditch next the motte was wider (3.75 m.) at the point tested and more rounded than that of the other (3.25 m.) which was more V-shaped. The boulder clay between the two ditches is seen in Pl. XV a.

The lowest .50 m. of the outer ditch and the lowest .30 m. of the inner

---

1. Victoria County History, *loc. cit.*, p. 545.



were filled with grey clay mixed with rotten boughs and twigs and bones of animals. This appeared to be the natural filling of the ditches, a process which probably began as soon as they were finished, though they may have been cleared out from time to time until the castle was abandoned. The upper layers of sand and hardened soil probably represented the artificial filling of 1817.

In the inner ditch one piece of a plank was found at the level of the top of the grey clay 30 m. from the bottom. On the inner edge of the outer ditch, likewise at the level of the top of the grey clay 20 m. above the boulder clay immediately below but 70 m. above the bottom of the ditch in its centre, was found about half a mediaeval jug in pieces (Pl. XX a) and bits of several vases of the same kind (*e.g.* Pl. XX b).

From its position at the edge of the ditch and at the extreme top of the natural accumulation in it this pottery would seem to have been tipped into the position where it was found at the time when the site was levelled and the ditches filled in.

A certain number of small boulders were found in the surface humus of this trench and one piece of sandstone (41 m.  $\times$  30 m.  $\times$  125 m.) with two tooled edges making a right angle. This, the only worked stone found in either this or the second trench lay in the later filling on the outer edge of the inner ditch, and like the pottery in the other ditch is thought to have been tipped into its place at the levelling of 1817. Here also was found part of the antler of a red deer (Pl. XVIII a).

The second trench, 20-30 m. long and about 1.25 m. wide, was then dug across the outer ditch on the south side of the bailey (Pl. XXI b). Here there proved to be only one ditch about 9 m. wide. It was dug to within 15 m. of the depth of the inner ditches (1.60 m. from the present surface) with a very broad V-shaped section at the bottom (Pl. XXII, below), but apparently very little of the boulder clay was cut into, the sand lying more thickly here.

Beneath the surface humus on the bailey side the virgin sand was overlaid with 50 m. of clayey gravel beaten hard, and a similar layer but only 03 m. thick was observed on the outward side. This clayey gravel was held to be certainly artificial. It is probably the remains of soil piled up to raise the level on either side of the ditch, though there is of course no indication as to the height to which the level was raised, and on that view the presence of such artificial soil on the outer side suggests the

existence of a rampart on that side of the ditch, as appears for instance at Laughton-en-le-Morthen.

No such layer was observed in the trench dug across the inner ditches, but it is possible that one would have been found if the ends of the trench had been extended. On the other hand, if the structure next to be described is the support of a bridge, this layer of hard gravel might be an indication of a roadway.

As in the inner ditches the bottom, the lowest  $\cdot 70$  m., was filled with an accumulation of grey clay mixed with brushwood and bones. Sherds of mediaeval pottery and other things were found in this right down to the bottom.

### TIMBER FRAME

The trench revealed two squared beams of wood at the bottom running across it (Pl. XVI a, and XXII, below), that is following the line of the ditch, here E. and W. Their inner edges were  $2\cdot 70$  m. apart, and their outer edges  $3\cdot 18$  m. Part of a third beam crossing the ditch to join them showed in the east wall of the trench.

Cuts made in the west wall of the trench found the west ends of the E.-W. beams almost at once but trenches had to be cut in the line of the beams for over 5 m. before their eastern ends were reached.

A second beam joining them in a N.-S. direction was found 3 m. east of the east edge of the first. All four beams were followed to their ends in both directions by trenches, but time did not admit of digging out the soil in the area they enclosed nor did it seem that much would be gained by this.

The beams were roughly square in section with sides measuring from  $\cdot 19$  m. to  $\cdot 26$  m.

The structure, of which a plan and section are shown in Pl. XXIII, was rectangular but not quite square, the E.-W. direction along the ditch being some  $\cdot 30$  m. the longer. The ends, too, which projected beyond the rectangle, no doubt for the sake of stability, were longer in these directions than the N.-S. ends.

The two junctions on the south beam (Pl. XVIII k) were much decayed, but both those on the north beam had the remains of an upright reaching a height of about  $\cdot 10$  m. which was fitted to the horizontals by mortise and tenon, the tenon being complete in both cases (Pls. XVII a and XVIII b).

The upper half of the lower horizontal and the lower half of the upper were cut away to allow them to lie flush at the crossing (Pl. XXIII z). At the NE. junction the mortise,  $\cdot 16 \text{ m.} \times \cdot 17 \text{ m.}$ , was carried right through both of them, but at the NW. junction, where it was only  $\cdot 135 \text{ m.}$  square, it went right through the upper but was only cut half-way through the lower beam.

In both of the projecting ends of the east beam, and in the north end of the west beam was a vertical hole from  $\cdot 10 \text{ m.}$  to  $\cdot 24 \text{ m.}$  from the end and  $\cdot 03 \text{ m.}$  in diameter, doubtless for a tying-down peg. No doubt there was a corresponding hole at the south end of the west beam, but this end was decayed.

Towards the middle of both east and west beams are a pair of slots cut in the inner edges. Similar slots are cut in the north edges of both projecting ends of the north and south beams. The ends of these slots are not cut square but at an angle, so that they always slope towards the nearest upright.

That they are mortises for the ends of slanting struts supporting each of the four uprights on two sides is sufficiently clear, and this interpretation is confirmed by a hole in each case bored through the beam to the slot from the other side. In three cases, in the two slots on the east beam, and in the slot at the east end of the north beam, the peg that pinned the strut was still in position in the hole (Pls. XVI b and XVII a, b, c).

The diameter of these peg-holes is  $\cdot 03 \text{ m.}$  and their distance from the top of the beam  $\cdot 04 \text{ m.}$  to  $\cdot 06 \text{ m.}$  The dimensions of the slots were not uniform, the depth varying from  $\cdot 10 \text{ m.}$  to  $\cdot 15 \text{ m.}$ , the length from  $\cdot 15 \text{ m.}$  to  $\cdot 20 \text{ m.}$ , while the width was about  $\cdot 08 \text{ m.}$

Nor was the angle uniform, the north slot of the east beam having angles of  $116^\circ$  and  $67^\circ$ , while the south angle of the southern slot on this beam was  $104^\circ$ . The northern slot would thus meet its upright at a height of about  $1\cdot 37 \text{ m.}$ , but it is plain that with exact fitting the southern would not meet its upright for another metre. This height of nearly eight feet appears perfectly reasonable when we consider that the sides of the ditch must have been raised artificially and that the top of the bank may well have been ten or more feet above the bottom of the ditch, but, as far as can be judged from the joints, the carpentry was not so accurate that we can safely argue from the angles of these slots. It is also conceivable, though improbable, that the shaft of the strut did not follow the angle of its tenon, which possibility throws another element of doubt into the question.

It might have been expected that remains of at least one of the struts would be found *in situ*. The probable explanation of their absence is that these lighter timbers were stripped off when the castle was abandoned.

In the neighbourhood of each of the slots on the east and west beams and of the slots in the east ends of both north and south beams there is a depression in the upper surface of the beam (Pl. XVI b). This is in every case a curved hollow and roughly oblong, but the hollows are not all of the same size (the measurements of those on the east and west beams are, East beam, N.  $\cdot 19$  m.  $\times$   $\cdot 11$  m., S.  $\cdot 25$  m.  $\times$   $\cdot 11$  m.; West beam, N.  $\cdot 15$  m.  $\times$   $\cdot 15$  m., S.  $\cdot 13$  m.  $\times$   $\cdot 11$  m., the longest measurement being with the grain of the beam), nor are their relative positions in regard to the slots the same.

Every consideration of symmetry and balance suggests that similar hollows should have been found on the west ends of the north and south beams. They were not observed there and we must presume either that decay had destroyed them or that some accident prevented their appearance.

These hollows had every appearance of being the result of pressure and friction, not of cutting, and that they were not designed is shown by the northern one on the east beam, where by the wearing the peg that tied the strut has been exposed, with obvious weakening of the structure.

They find an explanation if this framework is held to be the support of a drawbridge lowered on hinges, for we may suppose that supports additional to the uprights were supplied in the form of legs attached at right angles to the under side of the bridge itself, the ends of which legs might well have worn these marks where they rested on the beams.

A block  $\cdot 25$  m.  $\times$   $\cdot 15$  m.  $\times$   $\cdot 13$  m. with the narrow side trimmed to a wedge-shaped point at one end was found lying in the hollow of the NE. end (Pl. XVII c).

Reference to the section (Pl. XXII below) will show that, while the north beam is as close as may be to the edge of the ditch at the bottom, the south beam is further from the south bank. It is reasonable to suppose that the support would be placed as far away as practicable from the enemy's side of the ditch.

A suggested reconstruction of the bridge is shown in isometrical projection in Pl. XXIV, where the shaded portion shows the actual remains, and the thin line the parts for which there is good evidence,

while the bridge and its legs, being merely conjectural, are drawn in broken line.

Three of the junctions showed slightly wedge-shaped planks (Pl. XVII a) driven under them to act as further support, and very probably to make the frame level, as in fact it was practically horizontal. This is shown by a comparison of the section in Plate XXII (across the west ends of the north and south beams) with that in Plate XXIII (along the east beam). Or it is possible that the planks were put there in an attempt to cure or prevent a tendency of the structure to settle down unduly. The east side shows more of them and it is noteworthy that the section here (Pl. XXIII x) shows that owing to a downward slope to the east of the boulder clay the virgin soil on this side is sand over which as a foundation was laid first a layer of clay, then a layer of brushwood, and finally a second layer of puddled clay in which the beam is sunk. No brushwood, only rootlets, was found beneath the west beam, the clay there being only just below. A section in the middle of the south beam showed some brushwood, but to a lesser thickness.

The purpose of the large block of wood (Pl. XVII a) inside the NE. corner is obscure. It was lifted but there was nothing beneath it. If it also was a wedge it had shifted from its place.

Various bits of wood were found in the trench near the SW. corner. Under one of these, a flat piece with one wedge-shaped end (Pl. XVIII i) were found two pieces of mediaeval pottery and the much worn sole of a shoe or sandal (Pl. XVIII h). Under it, too, but with the end projecting was a stake (Pl. XVIII d) .92 m.  $\times$  .18 m.  $\times$  .08 m. driven into the boulder clay at an angle of  $45^\circ$  away from the structure in a westerly direction. No explanation of this could be suggested.

A certain number of wood chips were found particularly along the east beam, suggesting that some trimming, perhaps the cutting of the strut ends, was done on the spot.

One of the tenons of the uprights and one detached piece were submitted to the Natural History Museum, South Kensington, and pronounced to be oak.

A good number of boulders, the biggest with a longest side of .48 m., were in the original trench especially to the north and south of the ends of the framework. There was a noticeable absence of such stones between the ends. Their presence may be accidental, but it is conceivable that they were put there as ballast for the structure,



or, but this is less likely, that they were stones fallen from a facing of the banks.

The writer in the Victoria County History, Mr. Willoughby Gardner, is of opinion that the whole structure of the castle was of wood, and, though the extent of the work so far done is small, nothing has been found to suggest a different conclusion.

## THE FINDS

### POTTERY

The mediaeval pottery of grey, reddish, or buff clay, sometimes plain but in general partly or wholly covered with a poor bad glaze, green, greenish-brown, or greenish-yellow in colour, is not easy to date.<sup>1</sup>

Pitchers, however, of the general form of that shown in Pl. XX a are assigned to the fourteenth century.<sup>2</sup> A handle must be supplied like that shown in Pl. XIX b with vertical channels. Pieces b, d, g, i, k, l, m, n, o, q, aa, cc, and ee, in Pl. XIX are from pitchers of the same shape. The piecrust pattern at the base of such vessels made by the thumb while the clay was still soft before baking (Pl. XIX cc, ee), is a common form of ornament to be dated probably to the same period, the fourteenth and fifteenth centuries.<sup>3</sup>

The zigzag incised design which appears on the two or three of our sherds (Pl. XIX v, w) is put also in the fourteenth century.<sup>4</sup>

These dates fit in very well with the known abandonment of West Derby Castle in the middle of the thirteenth century, since the sherds found at the bottom of the ditch may be thought to have begun to accumulate there as soon as it was no one's business to keep the ditch clear. Much the same date may well be assumed for the spout of a jug covered with the same greenish glaze shown in Pl. XX b, though we have not found a parallel for this pleasing form.

1. Cf. Burlington Fine Arts Club, *Illustrated Catalogue of Early English Earthenware*, 1914, p. xviii.

Hobson, *Catalogue of English Pottery in the British Museum*, pp. 54 ff.

2. Burlington Fine Arts Club, *op. cit.* Case A, No. 28, Plate III, 14th Cent.

Hobson, *op. cit.*, p. 62, Fig. 47, 14th Cent.

*Catalogue of the Guildhall Museum*, 2nd Ed., 1908, No. 105, Pl. LXVII, 2; No. 125, Pl. LXIX, 7, 14th-15th Cent.

3. Hobson, *op. cit.*, p. 60, Fig. 45, early 14th Cent.

Burlington Fine Arts Club, *op. cit.*, p. 2. Case A, No. 7, *circa* 1300 A.D.

*Guildhall Catalogue*, *op. cit.*, No. 63, Pl. LXVI, 8, 14th Cent.; No. 124, Pl. LXVII, 3, 14th-15th Cent.

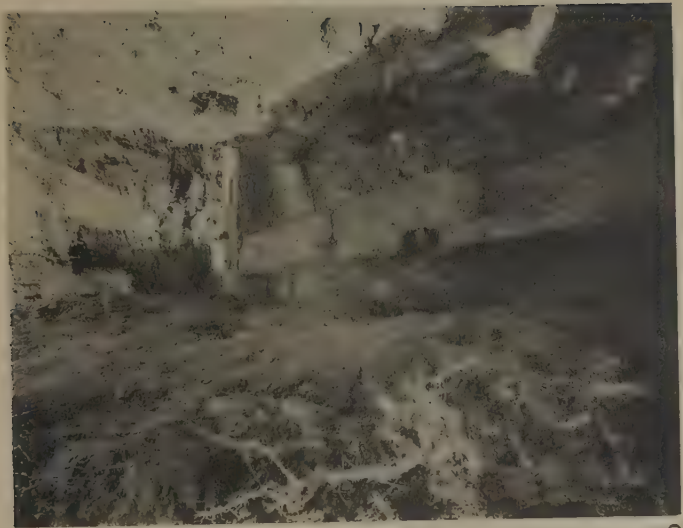
4. Burlington Fine Arts Club, *op. cit.* Case A, 9, 10, Pl. VI, 14th Cent.



WEST DERBY CASTLE.

- a. TRENCH ACROSS INNER MOAT, SHOWING TWO DITCHES.  
b. MOATS SEEN FROM THE AIR.





a



b

WEST DERBY CASTLE.  
a. TRENCH ACROSS OUTER MOAT. b. TIMBER FRAME. EAST BEAM FROM SOUTH.







a



b



c

WEST DERBY CASTLE. TIMBER FRAME.

- a. N.E. JUNCTION OF BEAMS FROM WEST.
- b. EAST END OF NORTH BEAM SHOWING SLOT, PEG, AND WORN HOLLOW.
- c. AS b BUT WITH TIMBER END LYING IN HOLLOW.



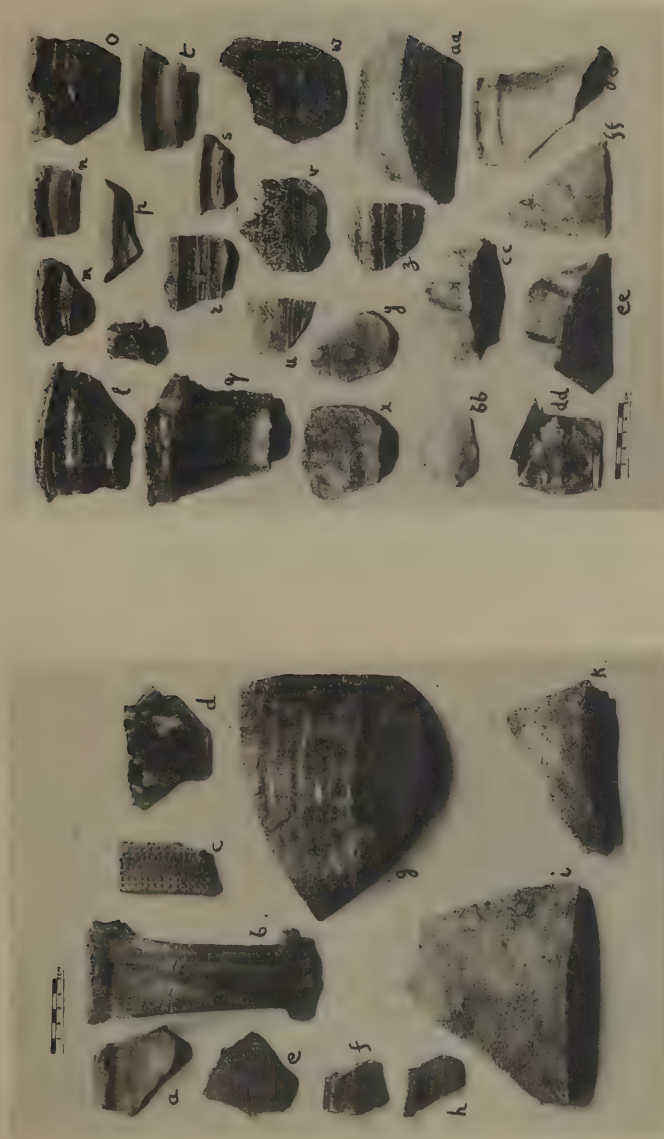


WEST DERBY CASTLE.

a-i. TIMBER, ETC., FROM DITCHES.

k. TIMBER FRAME. VIEW OF SOUTH BEAM FROM WEST.





WEST DERBY CASTLE. MEDIAEVAL POTTERY.







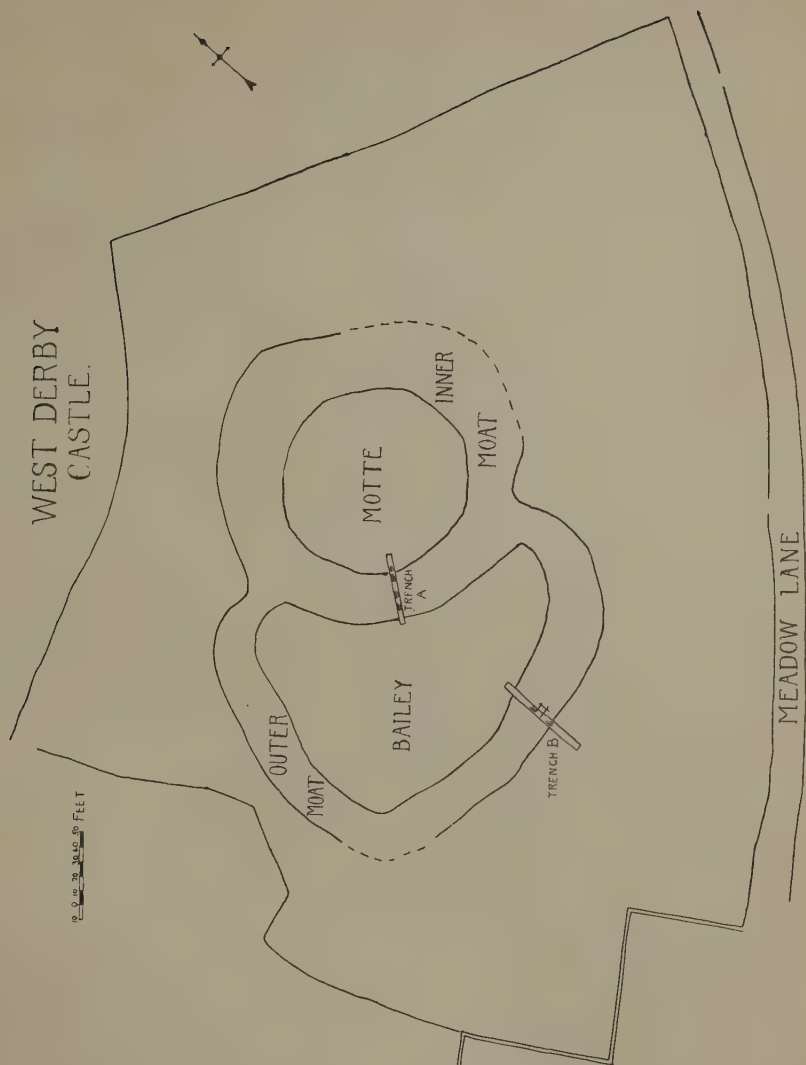
a



b

WEST DERBY CASTLE. MEDIAEVAL POTTERY.

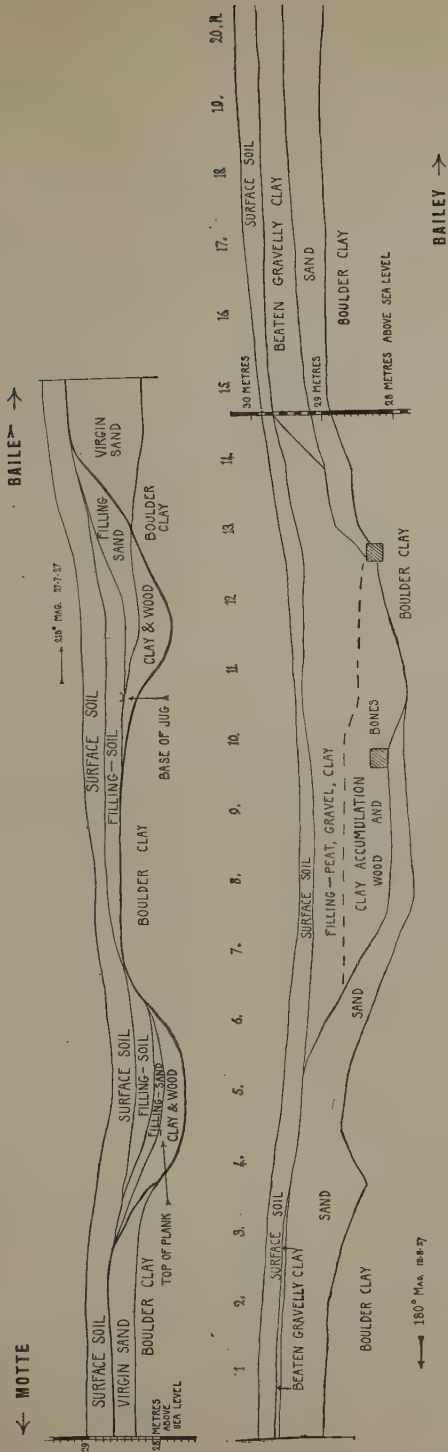




PLAN OF CASTLE FIELD AND CASTLE, WEST DERBY.

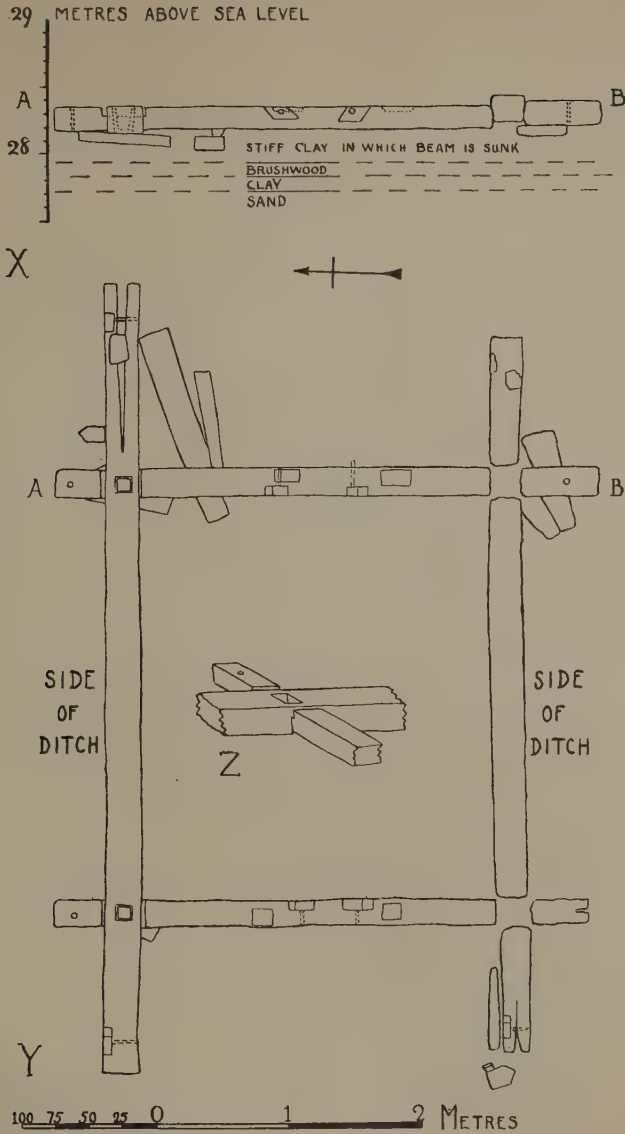






WEST DERBY CASTLE.  
ABOVE—SECTION ALONG TRENCH A ACROSS INNER DITCHES.  
BELOW—SECTION ALONG TRENCH B ACROSS OUTER DITCH.

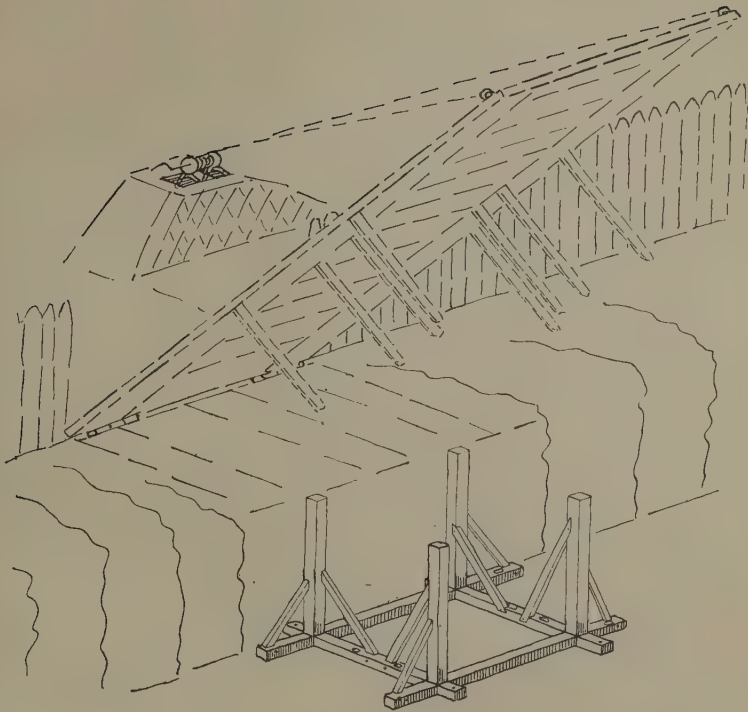




WEST DERBY CASTLE.

TIMBER FRAME. X—SECTION. Y—PLAN. Z—DETAIL.





WEST DERBY CASTLE.  
SUGGESTED RECONSTRUCTION OF BRIDGE AND SUPPORT.





## LEATHER

The leather sole (Pl. XVIII h) also, though it has lost its most characteristic feature, the toe, much resembles in form one in the Guildhall Museum of the fourteenth-fifteenth century.<sup>1</sup> The stitch holes, moreover, by which the upper was attached edge to edge without the intervention of a welt, enter the edge of the sole and emerge in its upper surface exactly as on a fourteenth-fifteenth century shoe found in excavations at Chester by Professor R. Newstead, F.R.S.

## METAL

Two or three iron nails were found (Pl. XVIII g) and two pieces of thin brass plating fastened together by copper rivets (Pl. XIX dd). Thanks to some quality in the clay this was in perfect preservation. This was at the bottom of the ditch close to the SW. end of the frame.

## HORN OR BONE

In the upper filling of the inner of the two ditches between motte and bailey was found part of the antler of a red deer (Pl. XVIII a).

Among the bones of animals found in the grey accumulated clay in all three ditches the ox, the sheep, and the pig were represented. Some had been split, presumably for the sake of the marrow.

It is hoped that the investigations may be continued next year.

---

1. *Guildhall Catalogue*, *op. cit.*, Pl. LXXVI, 7.

## REVIEWS

*A Cretan Statuette in the Fitzwilliam Museum ; A Study in Minoan Costume.*  
By A. J. B. WACE. Pp. 1-49, Plates I-XIII, Text-Figures 1-2.  
Cambridge University Press, 1927.

The Fitzwilliam lady is to be congratulated on being presented to the world with a sumptuousness almost proportionate to her rumoured cost, and moreover by a writer who is perhaps unique in being as much at home in the study of textiles as in Minoan archaeology.

Mr. Wace is interesting on the subject of patterns, as to which must have been applied and which may have been woven, and on the materials at the disposal of the Minoan Paquin, and this, as his sub-title shows, is his main pre-occupation.

The authenticity of the lady, though her pedigree not unnaturally hardly goes further back than Paris, is treated tacitly as beyond question. And at any rate it is beside the sartorial point, since the details of her garb do not really differ from those of other ladies who are above suspicion.

Doubtless we shall have opinions on the point from authoritative sources, but, though a clay figurine may be easier to manipulate in two pieces, and it is obvious that two small pieces of ivory may be easier to come by than one larger piece, I am left wondering why a Minoan should make a small figure of marble in two halves.

J. P. DROOP.

*Essays in Aegean Archaeology presented to Sir Arthur Evans in honour of his 75th birthday.* Edited by S. CASSON. Oxford, Clarendon Press, 1927. 21 Plates and Frontispiece, pp. ix+142. 15s.

The practice of celebrating the jubilees of distinguished scholars by the presentation of a *Festschrift* has clearly come to stay. The sentimental appropriateness of such an offering by colleagues and friends cannot be questioned, but every scholar knows the practical inconvenience of such volumes in the library of reference. That inevitably they tend to become mausolea of valuable contributions is indisputable. There is a way out which I could wish were more often adopted, viz. to follow the admirable example of the *Λαογραφικὴ Ἐταιρεία τῆς Ἑλλάδος*, which devoted a special volume of *Λαογραφία* to its memorial to Politis, and embody the Miscellany in a special number of some appropriate periodical. The particular specimen of the *Festschrift* which is before us was organised under the auspices of the Oxford Philological Society, which perhaps

explains the limitations of its scope, for good as are its contents, it would be idle to pretend that they truly represent the whole range of Evans' achievements or his position in the world of international scholarship.

The domestic wreath, however, is worthy as such of its recipient. It contains papers by Childe, Cowley, Farnell, Forsdyke, Hall, Hill, Hogarth, Myres, Peet, and Sayce, and, of foreign scholars, Rodenwalt, Marinatos, and Xanthoudides. All are worth reading. Farnell's essay upon 'Cretan Influence upon Greek Religion' inevitably suffers from having been written before the appearance of Nilsson's recent big book upon the subject. Hogarth usefully points out that the current superstition that Aegean sepulchral figurines point to the existence of the cult of a Mother Goddess rests upon no evidence at all and as an hypothesis is improbable. The point is not, of course, new. Clemen, for instance, has sensible remarks about the matter in his *Religionsgeschichte Europas*. But it was worth emphasising, none the less, for the Mother Goddess hypothesis continues to be repeated as though it were Catholic truth (e.g. *Cambridge Ancient History*, Plates 1, introduction). One of the most interesting papers is that of Xanthoudides explaining Minoan potter's-wheel discs in the light of the potter's craft in Crete to-day. Hill's admirable description of the Cretan coins in the Seager Bequest shows a happy choice of topic appropriate as it is to another main branch of study to which Sir Arthur Evans has made such notable contribution, and not less because it commemorates a personal friend of Evans, a benefactor of British as well as of American archaeology, a colleague and host whose services and whose personal geniality and kindness were always at the disposal of brother archaeologists. But perhaps the most delightful thing in the book is the frontispiece, a characteristic portrait of Evans himself.

W. R. HALLIDAY.

*Die Inschriften der Jüdischen Katakombe am Monteverde zu Rom entdeckt und erklärt von D.Dr. Nikolaus Müller, vervollständigt und herausgegeben von Dr. Nikos Bees mit 173 Abbildungen im Text.* Pp. 1-184, Leipzig, 1919.

This publication of 185 epitaphs from the Jewish catacomb of Monteverde at Rome is a work undertaken by the late Weiland Professor of Theology at the University of Berlin, Dr. N. Müller, to complete his earlier work dealing with the catacomb itself and its discovery. It has been finished in collaboration with Professor Deissmann after the death of Dr. Müller, by Dr. Nikos A. Bees, whose notes throughout are of value, particularly so in supplying the probable dates, while the last third of the book is entirely his work.

It is difficult for one not versed in the history of the Jews in the Rome of the Empire to estimate the value of this new material, which ranges from the early second century to the fourth, but to the layman the large proportion of inscriptions in Greek with the formula *ἐνθάδε κείται*

comes as a surprise. Indeed a number of the epitaphs in Latin seem not to be those of Jews.

The reproductions in half-tone of the inscriptions (in which a frequent representation of the seven-branched candlestick strikes the eye) are adequate, but the photographer does not appear to have realised the importance of photographing inscriptions the right way up at whatever cost of trouble, with the result that, though he has been successful in getting his shadows in the letters, many of the inscriptions look as though they were in relief.

J. P. DROOP.

*Bericht über die photographische Expedition von Kairo bis Wadi Halfa.*  
Von WALTER WRESZINSKI (*Schriften der Königsberger Gelehrten Gesellschaft*, 4. Jahr, Heft 2). Halle a. S., 1927.

In the winter of 1925-26 Dr. Wreszinski undertook a *dahabîya* journey from Cairo to Wadi Halfa in order to fill up certain gaps in the material for the second part of his *Atlas*, which deals with representations of foreigners in the Egyptian tombs and temples. The present volume is a record, mainly in the form of a diary accompanied by photographic illustrations, of this voyage. Those who read it will certainly not fail to be impressed by the amazing energy and devotion with which Dr. Wreszinski, his wife and his assistant carried out their laborious task, and no one will doubt the immense value to science of the photographic records which they secured. What is a little puzzling, however, is the exact purpose of this volume. It seems to fall between two stools: it is not a book of travel pure and simple, though it is evident from parts of it that the author could have given us a very attractive work in this kind, nor is it a purely scientific account of work done. There are seventy-seven plates of excellent collotype illustrations, but they form an odd collection, with so little to bind them together that, though there are rare and valuable things among them, only those Egyptologists who are blest with exceptional memories will be able to remember where they have seen them and turn them up when required. Still we must remember that Dr. Wreszinski has here given us many odds and ends which do not fit into the scheme of his *Atlas*, and which otherwise he could not have given us at all. We should be thankful for them rather than complain.

T. ERIC PEET.

*Il Giornale della Necropoli di Tebe*, a cura di GIUSEPPE BOTTI e T. ERIC PEET, fascicolo I. *I Papiri Ieratici del Museo di Torino*. Torino, Fratelli Bocca, Editori, 1928. Agents for sale in Great Britain: University Press of Liverpool Ltd., and Hodder & Stoughton Ltd.

It is a very strange fact that the Egyptian collection of the Museo d'Antichità ed Egizio in Turin, which is one of the oldest and richest,




is still very inadequately known to scholars. Of its treasures very few have yet been published, and so for the hieroglyphic inscriptions we have mostly to refer to the insufficient copies published many years ago by Maspero in the *Recueil de travaux*, II and III, while the commercial papyri of the New Kingdom were until quite recently accessible only in the poor facsimiles contained in the obsolete and unobtainable work of Pleyte and Rossi, *Papyrus de Turin*. It must therefore be greeted as a considerable mark of progress that there is now a hope that this publication will be finally replaced by a new one. Its plan has been fixed by the late director of the Turin Museum, Prof. E. Schiaparelli, to whom the present volume of the joint authors—the first instalment of their work—is very appropriately dedicated. Prof. Schiaparelli has been fortunate in finding two scholars who are extremely capable of undertaking the difficult task of publication. For those who never saw the Turin papyri collection, it must be pointed out that there are not only the large pieces, some of which were already published by Pleyte and Rossi, but also a vast number (some five thousand or more) of small fragments, the cursory perusal of which shows that they, in part at least, complete the large ones. Dr. Botti, despite his heavy teaching duties, has found time and patience to make himself admirably acquainted with both the technical and the palaeographical side of the papyri, and Prof. Peet, during several visits to Turin, has placed his well-proved experience in hieratic at the disposal of the publication.

The present *fascicolo* is the first of the three which are to form the first volume, containing three log-books of the Theban Royal Necropolis under Ramesses IX (year 13 and 17) and Ramesses X. It is a material which promises to yield valuable information as to the chronology, history, administration, and life of the lower classes of the population under the XXth Dynasty, quite apart from the rich harvest of proper names, words, and smaller contributions to the Late Egyptian grammar. The collaborators do not give a comprehensive study of their papyri, but only a preliminary treatment, that is photographs, together with transcriptions, descriptions, and translations, accompanied by the necessary notes. In short, they are putting these materials before the student and inviting further study. The descriptions are concise and clear and the authors had the excellent idea of joining to their descriptions sketches admirably illustrating the complicated disposition of the texts on the papyri. The twenty plates of the first *fascicolo* contain photographs with the corresponding transcriptions into hieroglyphs in front of each. The photographs are excellent, and in order to appreciate them it is necessary to take into account that most of the Turin papyri are mounted on vegetable paper, which, though transparent, nevertheless causes serious difficulties to the photographer. So Ing. Molfese, who made the plates, is to be congratulated on the results obtained. The transcriptions are carefully printed in a clear and attractive autography by Prof. Baglione, who has wisely chosen Gardiner's type as his standard. The reviewer found as the only objectionable





- 11, 8. The reviewer does not believe that Penpahapi is the spelling of the proper name (for  $\dot{h}^i p^i$  is never abbreviated to a mere  $\frac{p}{\dot{h}}$ ) but he has nothing better or certain to propose. Perhaps simply Penpay (i.e. *Pnp<sup>i</sup>iw*).
- 14, 5. For  cf. GARDINER, *Notes on the Story of Sinuhe*, p. 30.
- 20, 2. The destroyed epithet of Amon is perhaps *Bw<sup>k</sup>nn* known from the pap. Br. Mus. 10335, recto 7 (publ. by DAWSON, *Journal Eg. Arch.*, XI, 1925, Pl. 35-38).
- 20, 4. *w<sup>i</sup> is.t* is not 'capo squadra di operai,' but 'chief of a crew (of a boat).'

The reviewer would stress the fact that the above criticism neither wishes nor is able to detract from the value of the present publication, and in his opinion there can be no doubt that the work of the joint authors represents a considerable enrichment of Italian scientific literature.

JAROSLAV ČERNÝ.



## OXFORD EXCAVATIONS IN NUBIA

By F. LL. GRIFFITH, M.A.

WITH PLATES XXV-XLVII

(Continued from Vol. XIV, p. 116)

### LVI. THE CHURCH AT ABD EL-GĀDIR NEAR THE SECOND CATARACT<sup>1</sup>

At the beginning of 1912 Mr. Edwin Freshfield, having gone up the Nile to the Second Cataract in pursuance of his researches into the remains of Eastern Christianity, brought us at Faras welcome news of a small well-preserved chapel with painted walls which he had examined near the Cataract. Accordingly Mr. Freshfield and Mr. Woolley took the next steamer to Halfa, accompanied by our native photograph-boys, and in a week of strenuous work made a plan of the building, and photographs, tracings and water-colour copies of many of the paintings. This tiny chapel at Abd el-Gādir is probably the most complete ecclesiastical building that survives in Nubia. In 1911 it was still used by the natives as a storehouse and shelter for their goats, but the attention of the Sudan Government having been drawn to it, Mr. Peter Drummond, the Conservator of Antiquities, immediately arranged that we should do what was necessary to preserve it, after which a guard would take charge and show it to visitors.

When the Faras work was over and the labourers had been dismissed, Mr. Woolley having meanwhile gone to take part in the excavations at Carchemish for the British Museum, Mrs. Griffith, Miss Cochrane, and I spent several nights at the wonderful house which Dr. Randall-MacIver had built on the desert at Buhen, going over daily to the church, four miles distant. There in accordance with Mr. Drummond's instructions I engaged a few labourers at the expense of the Government to clear the floor of a thick deposit of dust, fill up gaps in the walls, and fix a wooden

---

1. The place is marked in the Map, fig. 4 on p. 97 of Vol. XIV.

door at each of the proper entrances. The dust, like the decayed leaves, etc., from the herbage that had been stored there, was quite modern, and its clearance revealed no archaeological treasures ; but we had brought all the drawings with us and had time to examine carefully all the inscriptions and most of the paintings with their much-injured and obscure details, and Mrs. Griffith and Miss Cochrane made some additional copies. The chief new find among the paintings was the Trinity (No. 56). It is to be hoped that before it is too late some real expert in the subject with ample time will make an exhaustive record of the decoration of this unique monument of Nubian Christianity as well as of many remnants that exist all over Nubia and must soon perish.

I am indebted to Mr. Woolley for sending me in 1912 an able and suggestive report on the church, much of which has been utilised in the present account. In describing the drawings in the plates I was helped by the Rev. C. D. Biggs, D.D. My special thanks are due to Mr. F. E. Brightman, who most kindly brought his unrivalled knowledge of eastern ritual to a final revision of the whole account.

The church in question stands upon the west side of the river at the foot of a hill over against the first islands of the Second Cataract and a mile or so north of the rock of Abusir. On the hill top is the burial place of a Mohammedan saint who has given his name, Abd el-Gādir, to the hill itself, to the hamlet on the river bank below (called Fagrintauwo, 'Beneath the Saint' in Nubian) and to the ruins of the little church between them. The church appears to have been first noted by Lord Belmore's party, Dec. 24, 1817. His physician describes it thus : 'an old mud-house . . . divided into four apartments. The inside of the walls was ornamented with representations of Greek saints . . . ; 'the apartments themselves were filled with bags of salt-petre and common rock salt' ; all this was near 'the tomb of the venerable Shiekh Abdallah Gadi.'<sup>1</sup> After this I do not find it mentioned by any traveller earlier than Villiers Stuart, who in January 1878 describes it as an 'old Coptic church still so perfect that it could scarcely be called a ruin. The walls were covered with paintings of saints and angels and with several life-size frescoes of St. George and the Dragon.'<sup>2</sup>

Mr. Somers Clarke gives a plan (made in 1909) and states that 'no other

---

1. Robert Richardson, M.D., *Travels along the Mediterranean*, I, 454-5, cf. 450. See also the names out by members of the party, below, p. 69.

2. *Nile Gleanings*, p. 188.

ruin I have met with in the Sudan retains so much of its paintings, nor, indeed, so much of its roof.'<sup>1</sup>

In 1918, Mr. Freshfield himself printed a brief but interesting description accompanied by Mr. Woolley's plan, three views of the church and three photographs of the paintings.<sup>2</sup>

I cannot find any other references to it, old or new. The admirable pioneer Cailliaud, in 1820 missed this church as it lies at some distance from the track, but he gives an interesting view of a church at Abusîr; <sup>3</sup> the latter was then fairly well preserved and contained remains of paintings, but must be the same as a miserable ruin close to the river, and a little south of the rock, which is planned in Somers Clarke's work.<sup>4</sup> Only its isolation on the stony desert has saved the church of Abd el-Gâdir from the fate which has befallen the other brick ruins in Nubia during the last century.

## LVII. THE ARCHITECTURE, DECORATION AND INSCRIPTIONS

The first point that strikes one about the church, which is built entirely of crude brick, is its small size; and this in spite of the fact that, as can be clearly seen in the photographs of the exterior,<sup>5</sup> a room has been added at either side of the original building. This last measures no more than  $5 \times 5\frac{1}{2}$  metres, less than half the dimensions of the little Abusîr church. Its axis was about  $10^\circ$  north of the magnetic east to west in 1912; in plan it consists of three diminutive aisles, B, C, D, communicating with each other by a single archway and forming the body of a church with the usual entrances north and south. Each aisle measures in width from 80 centimetres to a metre; so narrow in fact are they that a person walking along them can hardly avoid brushing the painted walls on either side with his clothes. The central aisle or nave B, at its east end, had a doorway leading into a narrow transverse chamber A, running the whole width of the building north and south. Low down in the west wall of A is an arched window giving on to the south aisle C, and in the west corner of the north wall is an upright slit. This eastern chamber must be regarded as the chancel or haikal; immediately opposite the door a rough space in

1. *Christian Antiquities in the Nile Valley*, Pl. IX, fig. 1 and p. 54.

2. E. H. Freshfield, *Cellae Trichorae and other Christian Antiquities in Sicily, Calabria, and North Africa and Sardinia*, Vol. II, printed privately, 1918, pp. 163-166.

3. *Voyage à Méroé, Planches*, II, 31; cf. *Texte*, III, 260.

4. *Op. cit.*, Pl. IX, fig. 2.

5. Pls. XXVI, 1, XXVII, 1, and see plan, Pl. XXV.



the plastered wall, from which a few mud bricks still project, marks the site of the altar. Strange though it seems, the altar had been actually bonded into the east wall; this exceptional position seems to have been dictated simply by the scale of the diminutive building. The altar has been entirely broken away down to the floor, but must have measured about 1 metre in height and .60 in width along the wall. On either side of the altar was a niche in the east wall. The haikal, the two side aisles and the nave were all roofed with barrel vaults, except that the eastern end of the nave was once surmounted by a little dome. This is destroyed but has left evident traces of its previous existence.<sup>1</sup> The height from the floor to the top of the vaults in B, C, D is 2.70, but in A, where there is modern repair, only 2.31 metres. Light was probably admitted through openings in the dome as well as through the doors and the narrow windows at the west end of the aisles and the north-west corner of the haikal.

To this microscopic church A-D, which cannot have afforded accommodation either for performance of rites or even for sheltering many of the faithful, was added a chamber symmetrically at either side, *i.e.* north and south, E and F, more spacious than the original ones and increasing the dimensions of the building to  $9.20 \times 5\frac{1}{2}$  metres in a rough rectangle. These also are barrel roofed; the height of the vault in E is 2.65 metres, in F 2.60, both rather lower than in the original building. The outer doors, especially the wide north door, admit a good deal of light, and there was a window at each end of the added chambers.<sup>2</sup> The window-slit in the north-west corner of A was kept available by a broader triangular opening  $\Delta$  in the south wall of F, catching light from the door. The south entrance into E has a threshold 15 cm. above the floor, and the height from it to the soffit of the arch is 2 metres. The inner doors are slightly larger than those of the original building through which they open into the latter; thus the original south door of the chapel, which has a raised threshold, is only 1.41 metres to the soffit, while the added door of E is 1.72 high.<sup>3</sup>

Outside the southern door, backed against the eastern half of E, is the ruin of a rectangular mass of brickwork forming a platform which may well have been used for an outside pulpit<sup>4</sup> as Mr. Woolley suggested.

---

1. Pl. XXVIII, 2.

2. The walls are injured round the windows, but that window-slits existed originally seems proved by the peculiar position of the brick laid over the top of each. See Pls. XXV, 1, XXVII, 1.

3. Pl. XXVIII, 1.

4. Pl. XXVI, 2.

### *The Paintings.*

The paintings of the church of Abd el-Gādir are of exceptional importance ; though poor and rough in execution and injured by rubbing, scratching of graffiti, damage to the walls and deterioration of colours, they are as a whole in far better condition than any other series that we have seen. In the case of most other churches where painted work remains it is only the lower parts of the figures that are traceable. In converted temples and grottos, as at Wādī es-Sebū' <sup>1</sup> and Gebel Adda (Ferrēg) <sup>2</sup> a well-preserved figure may occur here and there, but nearly all the Christian paintings have been defaced or destroyed by the Moslems and the very plaster on which they were designed has been removed (as at Amada) by modern explorers seeking the Egyptian work which lay hidden beneath. The figures in many of the Abd el-Gādir paintings are still quite clear and unmistakable, and others become intelligible after prolonged examination. They thus furnish a unique series of designs illustrating most usefully the scattered fragments found elsewhere.

The whole of the wall surfaces inside the building have been smoothed with a coating of mud over the brickwork, and on this the paint has been laid. The principal designs are displayed on the east and west walls of the aisles. The lower parts of the side walls in the church are left plain so that the doors scarcely break the line of the paintings. The end walls of the nave and aisles, on the other hand, offer an unbroken surface of considerable height ; each of these spaces is occupied by a single subject which commonly extends from the vaulted ceiling to the floor, and the scale of the figures is usually much larger than at the sides. Along the arches of the nave the height of the subjects is made to fit the varying height of the spandrels.

### *Inscriptions and Graffiti.*

These, like the paintings, are in very bad condition. They include original painted legends in red and black attached to painted figures ; <sup>3</sup> all such are in Greek, as usual, and the lettering is of the distinctive Nubian type. They are dealt with in the list of the paintings. Like

1. Gauthier in Maspero, *Temples immergés de la Nubie, Rapports*, p. 111, et seqq., Pl. CXXIV, et seqq. ; Johann Georg Erzherzog zu Sachsen, *Streifzüge durch die Kirchen und Klöster Aegyptens*, p. 63 and figs. 210-214.

2. *Streifzüge*, p. 66 and figs. 218-221.

3. Pl. XXIX. None are visible in the photographs but there is a facsimile of the name of Joseph in Pl. XLV.

the painted legends, the incised graffiti,<sup>1</sup> so far as they are ancient, all commence with the cross and can thus be distinguished at once from the modern scribblings. They are partly in bad Greek, partly in Nubian mixed with Greek. Thus in 10 we have † Π[ε]τρος ? ] γραψον (ἔγραψον, ἔγραψα, ἔγραψεν ?), 'I Peter have written'; so also in 7 'Jesus the Christ: I, Onē, have written'; in 6 (cf. Pl. XXX, 2) I should now read † ΕΝ ΤΗ ΕΛΛΕΥCΙΑ CΟΥ ΟΤΑΝ ἔλθΕΝ ΜΝΗCΘΗΝ (*sic*), etc., 'At Thy Coming, whensoever Thou comest, remember (me), O Lord. *I Aolo son of Ami have written (this),*' the italicised portion being in Nubian curiously introduced by the Greek ἐγώ. Such composite writing is not uncommon in Nubian graffiti, wherein the ritual language is strangely mingled with the vernacular. Unfortunately these short and often much-injured inscriptions are for the most part unintelligible in the present stage of Old Nubian studies. The complete absence of Coptic graffiti is remarkable.

The list is as follows :—

- Room C. 1 at corner by 21,<sup>2</sup>  
2, 3, at 27-28.<sup>3</sup>  
4, at corner by 39-40.
- Room D. 5, at corner by 40-41.  
6, between Magi and Shepherds (44).<sup>4</sup>  
7, between Shepherds and Joseph (44).<sup>4</sup>
- Room E. 8, over door into C.  
9, 10, 11, east wall right side.<sup>5</sup>
- Room F. 12, on right of 56.<sup>6</sup>

There remain for consideration the modern graffiti, which in some places have done much damage. On the west wall of A a wretched *terguman* (dragoman) Yanni has cut his rather unintelligible record of 1820 in large Greek characters.<sup>7</sup> The person who wrote FYEDIAΠI<sup>8</sup> has been more discreet, but has cut the name in three places (opposite the haikal door in A and under 47 on the left side of 49 in E): evidently some dragoman with an imperfect knowledge of the capital letters, and perhaps misled by the Parisian pronunciation of the *r*, was trying to spell Frediani, by which name a certain Cav. E. Frediano became known to Belzoni; the latter records that Frediani visited him during the opening

1. Pl. XXX.

2. These figures refer to the numbers given to the paintings on the plan and in the catalogue below.

3. See Pl. XXXIV, 1.

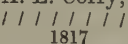
6. See Pl. XLVI, 2.

4. See Pl. XLIV.

7. Pl. XXX, a.

5. See Pl. XXXI, 1.

8. Pl. XXX, b, c.

of the Second Pyramid in March 1818 'on his return from the Second Cataract.'<sup>1</sup> On the south wall of F is <sup>A. L. Corry,<sup>2</sup></sup>  much defaced by 1817

deeply cut graffiti in Arabic. Similar Arabic graffiti are widely spread over the wall and occur throughout the building. This record helps to confirm the impression that the Moslem graffiti may all be subsequent to the first advent of the British tourist. They consist of the ordinary profession of faith, the names 'Omar al Hâq, 'Obeidallah, 'Abdallah, Ṣalîh son of Musl . . . , and the like.

### LVIII. CATALOGUE OF THE PAINTINGS

The decoration of the haikal A has suffered greatly.

1. A large hole has been dug through the east wall above the altar. Here there appears to have been a figure of Christ enthroned, three Apostles (?) standing on either side at a lower level; these last are still fairly clear.

2. A single figure.

3. The lower parts of a central and side figure out of a group of three.

7. Traces of a small figure or figures.

In the nave or central aisle B, as in the side aisles C, D, the paintings are generally in good preservation, but those at the east of B under the dome have disappeared.

#### *South Wall.*

10. Over the arch, faint remains of a cross or medallion.

11.<sup>3</sup> A haloed figure of an angel standing. The colours are very dark, The face and feet have been broken away and what remains is disfigured

1. Belzoni, *Narrative*, 2nd ed., p. 267. Frediano appears to have joined Lord Belmore's party in Nubia in 1817, though he is not mentioned by Richardson (see above, p. 64), and cut his name at the Second Cataract on 25th December 1817 before returning, see *Vorläufige Nachrichten von den Reisen des unter dem Namen Anciro bekannten Ritters Enagildo Frediano in Aegypten und den angrenzenden Ländern* in Jos. Hormayr, *Archiv. für Geographie*, 1820, Nos. 90, 91 (which is of no archaeological interest). The first European to reach the Second Cataract was J. L. Burckhardt in 1813.

2. It must be the signature of Captain the Hon. Armar Lowry-Corry, R.N. (afterwards third Earl of Belmore), who with his father, the second Earl, is mentioned in the preface of Irby and Mangle's *Travels in Egypt and Nubia, Syria, and Asia Minor*. Lord Belmore's collection of Egyptian antiquities and papyri was acquired by the British Museum in 1842 and published by its Trustees. On the plates of the former the objects in the collection are all stated to be from Thebes, 1818, but an offering table on Pl. 23 is of decidedly Meroitic type and a tablet is dedicated to the Cataract gods; these two may probably have come from Nubia.

3. Pl. XXXI, 2.

by the name of a modern tourist cut in the mud and plaster. The dark colour of this figure suggests that it represents the archangel Michael (compare No. 38) as a guardian of the king (No. 12).

12.<sup>1</sup> In the centre is a figure clothed in embroidered garments of imperial pattern and wearing upon his head a remarkable golden crown. On the top of this crown is a crescent; from either side of it project large curved horns each with three pendant balls, and on the front of it is King Solomon's seal. The flesh tints, unlike those of almost every other figure in the church, are of a deep reddish yellow. The splendid drapery, with its chlamys of diaper pattern in white and gold fastened on the right shoulder and thrown over the left arm, so showing the dark lining, and its tunic embroidered in many colours with the imperial design of double-headed eagles enclosed in roundels, is only matched by the drapery of the divine figure (No. 13) adjoining at the west end. In the ears of the great personage are golden earrings; in his right hand he appears to hold a sceptre. In his left hand is the white model of a small domed building which the great man holds in his hand, just as do the founders of churches in mediaeval England. Behind his right shoulder is a half-length figure of Christ (with cross in the halo), wearing a *pallium*, embracing him (somewhat as the gods of Egypt do the Pharaohs): this figure appears to emerge from a bank of cloud (?). Behind the other shoulder is a small haloed figure wearing within the halo a circlet of pearls with three half-hoops surmounted by crosses; in his left hand he holds a small circular shield while his right is raised open behind the head of the central figure. This is perhaps one of the warrior saints, and it is worth noticing that though his halo distinguishes him from the merely human personage whom he supports, yet the small scale upon which the saint is represented enhances the dignity of the central figure.

We are thus led to the conclusion that the picture represents the contemporary ruler of this part of Nubia holding in his hand the church of Abd el-Gādir: fortunately some portions of an inscription painted on the left side of the royal figure can be made out, my copy<sup>2</sup> giving apparently . . . ὁδηγήσου . . . ρικουδὰ ἐ[π]αρχ(ον) Νοβαδ(ίας), ' . . . guide thou . . . rikuda, eparch of Nobadia.' Nubian names ending in -κουδα are not uncommon,<sup>3</sup> and the title eparch of Nobadia occurs in Greek

1. Pls. XXXI, 2; XXXII.

2. Pl. XXIX.

3. Griffith, *Christian Documents from Nubia*, p. 26 (*Proceedings of the British Academy*, vol. XIV).



ἐπαρχου Νοβαδ. on a tombstone<sup>1</sup> and in Coptic ἐπαρχ(ος) ἐχ(η) (or ἡ) ἡνοβελια on Nubian legal documents from Aswan or Elephantine.<sup>2</sup> The eparch would be the petty king or governor of the northern province Nobadia, of which Pakhoras was the capital, under the supreme king ruling in Dongola.<sup>3</sup>

With this scene may be compared a similar scene but with less interesting detail in the Rivergate Church at Faras;<sup>4</sup> and the prayer in the inscription is like that attached to the figure of the ecclesiastic below, No. 38, and to another in the Rivergate Church.<sup>5</sup>

13.<sup>6</sup> The whole west end of the aisle is occupied by a great figure of Christ. The right hand is raised in the attitude of blessing with the fingers held according to the Greek ritual; the left hand is raised and holds a book the cover of which is yellow studded with white (*i.e.* gold and pearls). The face and central part of the body are broken away. The under-garment is white with yellow bands; this is visible below the neck where there is an edging of yellow with double row of pearls, the lower part being embroidered with diapered circles; over it is a red cloak. Just below the waist are small gold crosses hanging from the girdle.

#### North Wall.

14. Figure of the three-headed Trinity (see No. 56) seated on a throne, each head having separate nimbus coloured yellow with green cross. A book lies on the left knee. The outer drapery is white with narrow lines in blue, red and yellow; the under-garment is of dark purple.

15. Over the top of the arch is a small figure riding on a horse and facing south; the colours are mostly faded to black. The inscription above, painted in red, describes him as 'the holy martyr of Jesus Christ. . .'

On the curved under faces of the arch between B and C:—

19. Standing figure of a saint holding a book, whitish.

20. Similar figure, blackish.

1. Lefebvre, *Inscriptions grecques-chrétiennes d'Égypte*, No. 665, dated 1007 A.D.

2. Of the eighth and ninth centuries; cf. *Christian Documents*, p. 16.

3. See article on Pakhoras-Bakharās-Faras in *Journal of Eg. Arch.*, XI, 259-268, and *Christian Documents*, pp. 1, 28.

4. Vol. XIII, Pl. LXI and p. 77, No. 34. For the survival of the horns as a mark of kingship at Rashād in the Nuba Mountains, see the remarkable article, *Christian Nubia*, contributed by Crowfoot to *Journal of Eg. Arch.*, XIII, p. 143, and Pl. XXXIII; and for the origin of the horned headdress (from Alexander the Great?) see Wiedemann, *Orientalistische Literaturzeitung*, 1927, p. 480.

5. *Ibid.*, p. 82.

6. Pl. XXXIII, 1.



*South Aisle C. North Wall.*

21. A much-damaged group representing Christ with Thomas the Apostle. St. Thomas in white drapery with red and yellow markings and a yellow halo with a border of red and black, wearing, apparently, a short black beard, thrusts his right forefinger into the side of Christ, who stands to the right of him. Christ is dressed in a red cloak over a white tunic marked with yellow and black. Between the halos of Christ and Thomas is the legend 'The holy Apostle Thom[as].'

22. In the west spandril of the arch is a small figure of a rider on a black horse, facing south. The flesh tint is white, the other colours are all much faded; above him is a remnant of inscription 'The Ap[ostle] . . . ' in black.

24. In the east spandril is a disc, in which was presumably a face, surrounded by seraph wings. The colours, probably faded, are very dark, red, yellow and black.<sup>1</sup>

25. A small standing figure in white drapery, almost entirely perished.

26.<sup>2</sup> At the east end of the aisle over the low window or opening into F is a standing figure of an angel. Face and breast destroyed, remains of halo, wings yellow outlined in red, black and white; the cloak white with black diaper pattern, under-garment red. Right hand raised in attitude of blessing; the left hand, on the level of the waist, held some object now indistinguishable.

*South Wall.*

27.<sup>3</sup> A small standing figure of a saint, apparently a priest wearing a *phelonion*, yellow with border of red, the folds marked by black lines; the hands are held in front of the breast, the left at the waist, the right higher. Above the head is a remnant of inscription ' . . . rami . . . '

28.<sup>4</sup> In the spandril of the arch is a cross, a simple form of the *Crux gemmata*, surrounded by a kind of halo. Above is the inscription painted in black 'The Cross.'

29.<sup>5</sup> Over the top of the arch a small figure of a saint with uplifted hands in the position of an *orans*. The colours have probably faded and are now very dark; the flesh tints seem to be black. Above the halo are painted three small black crosses, and there are traces of red writing above the left hand.

1. Compare Rivergate Church, Vol. XIII, p. 76, Nos. 29, 31.

2. Pl. XXXIII, 2.

4. Pl. XXXIV, 1.

3. Pl. XXXIV, 1.

5. Faintly visible in Pl. XXXIV, 1, 2.

30.<sup>1</sup> A large figure of a rider on a pale reddish horse. His right hand holds a long lance the point of which, coming low down upon the wall, transfixes a small, shapeless figure in faded colours.<sup>2</sup> Above the head of the horse there is an inscription in red paint giving the Saint's name, 'The holy martyr of [Jesus Chr]ist, Mercurius.' The two long streamers on the right are carried on to the horse of the next with the colours interchanged: see the photograph.

31.<sup>3</sup> Immediately opposite the last figure and facing it is another martyr on horseback; on a smaller scale, being crowded into the corner, the streaming cloak carried on to the end wall. The flesh tints seem to be black, horse red, shield decorated with rosette, trappings black and gold; remains of painted inscription above 'The holy m[artyr. . .]' but name lost.

32.<sup>4</sup> On the west wall of the aisle, occupying its whole area, is an elaborate representation of the Three Children in the burning fiery furnace. The three figures stand side by side; the central one has been almost entirely destroyed, but the type is probably the same as that of the others. They stand with uplifted hands in the attitude of prayer. The artist has closely followed the biblical description, and Shadrach, Meshach and Abednego wear their cloaks, their trousers and their turbans, and behind them between the flames rises the figure of the fourth, who was like unto a Son of God. This figure, which has wings and a halo, and wears the Byzantine *loros* over a red tunic, holds in his right hand a staff, and in his left an orb (?). The face, as is the case with all the figures, has been destroyed by the Moslems. The subject occurs in the frescoes of the temple of Kalabsha.<sup>5</sup>

On the curved under faces of the arch between B and D:—

33, 34. Whitish haloed figures, standing.

#### *North Aisle D. South Wall.*

35. A small figure standing full face with yellow wings and halo, within which is a jewelled diadem. The outer garment is white with blue folds, and the inner garment is of white and red. Above the head is a faded inscription identifying the figure as 'The archangel M[ichael].'

1. Pls. XXXIV, 2; XXXV.

2. Cf. Vol. XIII, Pl. LVIII, 1, and below, p. 80.

3. Pls. XXXIV, 2; XXXVI.

4. Pls. XXXVII, XXXVIII.

5. J. G. Herzog zu Sachsen, *Streifzüge durch die Kirchen und Klöster Aegyptens*, p. 63.

36.<sup>1</sup> This is a curious emblematic representation of Christ and the four gospels. In the centre is a medallion with the head of Christ wearing a crossed nimbus; around this were the four conventional emblems of the four gospels, each the centre of four radiating wings which cross each other and form a frame to the medallion. The colours (perhaps faded) are sombre, dull reds and browns; the wings are curiously diapered and spotted. Above is written 'Jesus the Christ' in black ink. No. 29 or 31 in the Rivergate Church at Faras must have shown the same subject.

37.<sup>2</sup> Over the arch is a small figure the colours of which are now very dark though there are traces of white flesh-colour. The figure is standing and holds in its right hand a staff surmounted by a cross; it has dark wings, the face has disappeared and above in black ink are traces of the name which suggested 'Michael. . .'

38.<sup>3</sup> A small figure, apparently of a deacon, standing full face. The face which has been destroyed was originally red. The outer cloak is yellow with red folds, the under garment is of black and white in horizontal stripes. The left hand crosses the breast, holding a yellow ring with blue cord or pendant; the right hand, raised outwards, holds a large feather for a ritual fan coloured white with red and yellow markings. Between this figure and the wing of the following is an inscription in black:

† (κύρι)ε Ἰησοῦ Χ(ρισ)τὲ φύλ(α)ξον εὐλόγησον(?)<sup>4</sup> διάκονόν σου . . . 'Lord Jesus Christ guard and bless (?) thy deacon. . .'

39.<sup>5</sup> A large standing figure of an angel facing to the front. It has large wings and a yellow nimbus within which is a gemmed coronet; the tunic is blue with black clavi, the outer garment white with yellow folds. The right hand is raised and holds a horn (?), the left hand in front of the body holds a dish with a rosette pattern. The meaning of these symbols is not clear, but the black-ink description above this figure identifies him as 'The archangel Raphael.'

This series of figures, Nos. 37-39, at the west end of the south wall in the north aisle, corresponds in position to the eparch-scene No. 12, in the south aisle, and may represent the deacon of this little church standing between Michael and Raphael.



Fig. 1.



Fig. 2.

1. Pls. XXXIX; XL, 1.  
2. Pls. XL, 2; XLI.  
3. Pl. XLI.  
4. Cf. the eparch's inscriptions and the corresponding one in the Rivergate Church, above, p. 71, n. 4.  
5. Pl. XLI.

40.<sup>1</sup> Occupying the west end wall is a large figure identified by the cross in the nimbus as Christ. Both hands are raised in the attitude of an *orans*; the comparatively simple drapery is white with narrow folds in yellow and black. On the dexter arm of the nimbus cross is  $\bar{N}$  without accompaniment, and above the right shoulder of the figure is a remnant of inscription in black.

*North Wall.*

41.<sup>2</sup> A large figure of a rider on a grey horse. The spear transfixes below the rider's foot a similar shapeless object to that described in connection with figure 30. This rider is distinguished from the other by having a jewelled coronet surmounted by crosses, but no nimbus. The inscription appears to give the name of 'The holy martyr of Jesus Christ, George.' Over the head are painted three small crosses in white and one in black.

42.<sup>3</sup> A small figure standing full face. The right hand is raised to the breast with two fingers extended to the book which is held in the left hand. The face is broken away, on the head is a double circlet of white pearls within a yellow nimbus; the body is covered with a white garment like an alb with three stripes down the front, over which is a *phelonion* of yellow diapered in red with black filling-spots. The lower edge of the figure has been destroyed, and there has been a legend written above the head.

43.<sup>4</sup> A figure, which can be identified as Christ by the cross in the blue nimbus, seated on the ground. Over the head is  $\text{OXC}$  'The Christ,' and above the legend are three small crosses roughly drawn in white upon the wall surface.

44.<sup>5</sup> This and 45 together compose a single group, the magi and the shepherds leading up to the Holy Family on the east wall (45). The figures in 44 are on a small scale. In the upper part of the field are the Three Wise Men; mounted on horseback and in their 'Persian' costume, they are riding in the direction of the main figure upon the eastern wall;<sup>6</sup> each holds a red ball in his right hand, perhaps symbolising the gifts which they bring.

Below these to the left are two Shepherds whose colours are much faded. The figure on the left seems to be an old man; he wears only a

1. Pl. XLII, 1.

4. Pl. XLIV, 1.

6. So also at Es Sebū, J. G. Herzog zu Sachsen, *op. cit.*, p. 64.

2. Pls. XLII, 2; XLIII.

5. Pls. XLIV, XLV.

3. Pl. XLIV, 1.

loin-cloth of red and white, the flesh tint is yellow, as if to show the natural sunburnt skin of a countryman. He carries a water bottle and a long rough crook. The figure on the right, who is also clad in a loin cloth, points with the left hand towards the Virgin on the east wall. To the right of these is a small figure of Joseph, apparently seated cross-legged in oriental fashion, and clad in simple white drapery with folds marked in pale blue and a coloured border. His name 'Joseph . . .' is written in black ink above the figure.

45.<sup>1</sup> Here upon the east wall is the main group of the Virgin with whom the Child was probably represented. The primitive painting has been terribly damaged, and it was only with difficulty that the subject could be made out. The main lines however (helped out by comparison with the scene from Faras<sup>2</sup>) are tolerably clear. The Virgin reclines upon what may be meant for a straw mattress, roughly rendered by red and yellow lines. The upper part of the body rests against a pillow (?) of red diaper pattern on white with a border of red, yellow, white and blackish grey. Her dress is white, the folds rendered in light pink. The feet are bare; the right hand rests upon the knee; the left, in front of the breast, may have held the Infant, though the breaking away of the plaster makes this conjectural. The face has perished altogether, but the halo is still traceable. Above the right hand can be seen a manger of wattled work (red on white) with a red head-piece; between it and the body of the Virgin are the traces of an ass's head outlined in black, and above this a shapeless mass of red which probably was once an ox. Above the manger is the figure of an angel with yellow wings and halo and drapery of yellow, red and black. In the centre is a broad, upright bar of red which may be a pillar (compare the Faras drawing) or, more probably perhaps, the shaft of light thrown by the Star of the Annunciation, two tips of which can be distinguished above a break in the plaster. Above the head of the Virgin are three yellow crosses drawn upon the mud plaster. A cross upon the pillow shown in the facsimile suggests that the Madonna may have been crowned as in the Faras fresco.

#### Room E.

The paintings in this room and in F were all badly damaged, so much so that it is difficult to judge from the scanty remains whether they agree in

---

1. Pls. XLV, XLVI, 1.

2. Vol. XIII, Pl. XXXV.



style with those from the inner and earlier building. It is worth noting, however, that no written labels were detected in these outer rooms, while they are frequent in the church itself.

46. A rider on a black horse facing east ; nearly all the colour gone, flowing pink and white streamers.

47. A rider on a black horse facing west ; colour mostly perished. The horse is rearing, the rider transfixes some object with his spear.

48. A winged figure with uplifted hands stands full front by the side of a palm tree. Possibly St. John the Baptist preaching in the desert.<sup>1</sup>

49. Traces of a large standing figure with uplifted hands.

50. Faint traces of a figure on horseback facing west.

51. A large standing figure in dark colours, the outlines hardly visible.

52. Apparently a close group of five persons, partly concealing each other, much destroyed. One on the left appears to be standing in elaborate drapery.

#### Room F.

53. Traces of standing figure with nimbus.

54. Haloed saint on rearing horse, holding shield and spear with point upwards, facing the east ; much destroyed.

55. East of the last the wall appears to have been blank.

56.<sup>2</sup> A remarkable representation of the Trinity with three heads on one body, a standing figure apparently wearing a white cloak over a red undergarment, but the greater part is destroyed. The remains discernible are : at the extreme base of the wall two large feet and above them the curved edge of the skirt ; traces of body and shoulders with right hand upraised in blessing, left apparently holding a book ; three faces, the centre one almost entirely destroyed ; it is uncertain whether these were provided each with a separate crossed halo (as in No. 14) or were all included in one of oval shape, but a very careful examination nearly convinced us that the latter had been the case.

57. Saint holding shield and spear with point upward, riding red horse towards west. The flesh tints are white. Nimbus radiated, and cross on the top of the head (Fig. 3).



Fig. 3.

58. Faint traces of a design in dark colour, extending partly over the doorway ; perhaps a rider on a black horse towards west.

59. Probably a standing figure, in dark colours ; very little of it left.

1. Cf. Didron, *Christian Iconography*, II, 104.

2. Pl. XLVI, 2 ; XLVII.



60. Apparently a haloed figure standing surrounded by a stream of water (?) fed from a jar opposite either shoulder. The two sides are not symmetrical. The figure is copied from a rough sketch of the visible remains (Fig. 4).



Fig. 4.

## LIX. GENERAL CONCLUSIONS

*Purpose.*—This little church appears to have been built by an eparch of Lower Nubia (Nobadia) named . . . inkuda. The name Nobadia has not yet been found further south and it is probable that the Second Cataract formed the boundary between it and Makuria; <sup>1</sup> possibly it was to carry out a vow that the church was built at the lower end of a particularly desolate region full of difficulty and danger to navigation. Whether the additional chambers and external pulpit platform were built long after the original church we cannot tell; if the church proved popular among the scanty population and the navigators, and the need for sheltered space was realised, they may have been added very soon after it came into use.

*Date.*—There is unfortunately no direct evidence for dating the structure, but some facts point to its being late :—

1. The entire absence of Coptic from the graffiti is significant.<sup>2</sup> Coptic graffiti are among the early ones in the Anchorite's Grotto at Faras,<sup>3</sup> but are not found in the much restored Rivergate Church.<sup>4</sup>

1. Although one Arabic writer puts the boundary between 'Maris' and 'Mukurra' beyond the Third Cataract, cf. *Journal of Eg. Arch.*, XI, 265.

2. Cf. *Christian Documents from Nubia*, pp. 17, 18.

3. Vol. XIV, Pl. LXXIII.

4. Vol. XIII, Pls. LXIV, LXV.

2. The uniting of the Three Persons in one Body in pictorial art, as in No. 56, is first recorded for the fifteenth century in the West, and Didron knew only two instances for the East, and those of the eighteenth century.<sup>1</sup>

3. The rude style of painting in the chapel might be partly explained by the mere poverty of the whole undertaking ; certain figures—the large ones on the west walls, the Trinity on the east wall of F, the eparch and the ecclesiastical dignitary, St. Mercurius, St. George and St. Raphael—are much more carefully painted than others where want of space rather than inferiority of subject seem to have disgusted the artist. Thus Michael, though he corresponds to and is of more importance than Raphael, is sketched very summarily ; and on the west wall of the south aisle in the scene of the Virgin in the stable, the painter seems disheartened by the technical difficulties and the number of separate figures and details of the composition. But when all allowances have been made, the fact remains that the paintings give the impression of a base period when poverty and want of skill went hand in hand.

That Nubia remained Christian for some time after the building was decorated is shown by the Nubian-Greek graffiti scratched over the paintings, and the rude repair of the haikal wall and roof<sup>2</sup> may have been to restore the church to its proper use after some Moslem outrage. Official Christianity in Nubia seems to have expired in the first half of the fourteenth century.<sup>3</sup> On the whole, one would be inclined to put the building of the church later than A.D. 1000.

*Paintings.*—With regard to the appropriation of particular subjects to particular parts of a church in Nubia, not much can be gathered from the scanty materials as yet available, but there are some suggestive points of resemblance in different churches. As in Coptic churches in Egypt, over the altar there was frequently a figure of Christ raised high and reaching into the curve of the apse, surrounded by the Apostles in a single or double row. In the Citadel Church at Faras, where redecoration took place, this subject was repainted at the same spot on a new coat of plaster.<sup>4</sup> In the apse of the Central Church at Serrenkisse<sup>5</sup> and of the New South Church<sup>6</sup> at the same place, we find, apparently, the Apostles crowded with their heads on two

1. Didron, *Christian Iconography*, II, p. 62.

2. Pl. XXVII, 2.

3. See *Christian Documents from Nubia*, pp. 27, 28.

4. Vol. XIII, p. 59, and Pl. XXXIV.

5. Vol. XIV, p. 100.

6. Vol. XIV, p. 99.

different levels. Mr. Woolley quoted the church opposite Debēreh<sup>1</sup> as furnishing an instance, but for Adendān which he also quotes, the evidence of Mr. Mileham's photographs may point to a varied group of saints rather than Christ and the Apostles being represented.<sup>2</sup> The church of Wādī es-Sebū' also shows here Christ enthroned between the twelve Apostles.<sup>3</sup>

Scenes of the infancy of Christ, such as the Nativity, the Annunciation to the Shepherds and the Adoration of the Magi, are figured on the east end of the north aisle, here at Abd el-Gādir, and in the Citadel Church at Faras,<sup>4</sup> and similarly on the pillar to the left of the haikal in Wādī es-Sebū'.<sup>5</sup> This north-east position, towards Jerusalem, is a very natural one for such scenes. On the other hand, the scene in which the dedicatory of the church appears is on the south side of the nave, both in the Rivergate Church at Faras<sup>6</sup> and in the Abd el-Gādir Church. Not much more can be said at present as to any regular disposition of the subjects in the paintings.

Military saints riding horses and spearing some sort of dragon or other noxious creature of diminutive size, are favourite representations in Nubian churches. One occurs in the Rivergate Church at Faras,<sup>7</sup> and two, one with the name of Epimachus,<sup>8</sup> at Gebel Adda: at Abd el-Gādir two such bear the names of Mercurius (No. 30) and George (No. 41). The design of the head of Christ surrounded by the emblems of the four evangelists, from which spread seraphic wings, is common to the Abd el-Gādir (No. 36) and the Rivergate<sup>9</sup> Churches: so also is the allied design of the head alone (No. 22) surrounded by many pairs of wings.<sup>10</sup>

## LX. CONTENTS OF PLATES

Pl. XXV. Plan of the Church at Abd el-Gādir, by C. L. Woolley. The numbers refer to the catalogue of paintings, above, p. 69.

1. Mileham, *Churches in Lower Nubia*, ch. III. Somers Clarke, who mentions remains of painted figures (p. 60), calls it Hammam el Farki. My boatmen called it Hammam-kissē.

2. See Vol. XIV, p. 98, and Pl. LXXV, 3, 4.

3. Gauthier in Maspero, *Les Temples immergés de la Nubie, Rapports*, p. 117, Pl. CXXIX A; J. G. Herzog zu Sachsen, *op. cit.*, p. 64.

4. Vol. XIII, p. 59, and Pl. XXXV.

5. Gauthier, *loc. cit.*, p. 116, Pls. CXXVI B; CXXVIII; J. G., *Streifzüge*, p. 64.

6. Vol. XIII, p. 77, No. 34, and Pl. LXI.

7. Vol. XIII, Pl. LVIII, No. 16.

8. Cf. Griffith, *Nubian Texts of the Christian Period*, pp. 66, 67, (15) (a), (i).

9. Vol. XIII, p. 76, No. 31.

10. *Ibid.*, No. 29.

Pl. XXVI. Views of the church taken by E. H. Freshfield in 1911, both doors partly blocked with stones.

1. From the north-west ; on the roof a pile of goat's fodder.
2. From the south-east ; remains of platform on right of south door.

Pl. XXVII, 1. West end, showing additions to original building.

2. East end, showing mud-repair of the ruined haikal.

Pl. XXVIII, 1. North door of Room E, looking through arch of south aisle to south door of B. (E. H. F.).

2. Looking over the roof from the south end, showing square base of dome.

Pl. XXIX. Painted legends belonging to the pictures, see the catalogue, p. 68.

Pl. XXX. Incised graffiti (a, b, c modern), see p. 68.

Pl. XXXI, 1. Incised graffiti, Nos. 9-11, at the east end of E (painting No. 49).

2. Angel (No. 11) ; eparch holding model of church (No. 12), in the south-west corner of the nave.

Pl. XXXII. The eparch of Nobadia, dedicator of the church (No. 12), from a coloured drawing by E. H. F. and C. L. W.

Pl. XXXIII, 1. Christ, at west end of nave, No. 13.

2. Angel (No. 26) at east end of south aisle ; below the painting a low window into the haikal.

Pl. XXXIV. South wall of south aisle.

1. Ecclesiastical saint (No. 27) ; cross (No. 28) ; black *orans* (No. 29) with incised graffiti, 2, 3 (Pl. XXX), between 27 and 28.

2. Black *orans* (No. 29) ; Mercurius (No. 30) ; and another (No. 31).

Pl. XXXV. Saint Mercurius (No. 30), by E. H. F. and C. L. W.

Pl. XXXVI. Military saint (No. 31), the cloak and tail of the horse carried round the corner on to the west wall, by N. G.

Pl. XXXVII. West end of south aisle (No. 31), and the Children in the Furnace (No. 32).

Pl. XXXVIII. The Children in the Furnace (No. 32), by E. H. F. and C. L. W.

Pl. XXXIX. On south wall of north aisle, east end. Bust of Christ surrounded by winged emblems of the Gospels (No. 36), by N. G.

Pl. XL, 1. No. 36.

2. Angel (Michael ?) (No. 37), from drawing by Miss E. M. Cochrane.

Pl. XLI. South wall of north aisle, west half. Angel (No. 37) ; . . . with feather (No. 38) ; archangel Raphael (No. 39).

Pl. XLII, 1. Christ (No. 40), on west wall of north aisle, with graffiti 4, 5 (Pl. VI).

2. St. George (No. 41), on north wall of north aisle.

Pl. XLIII. St. George (No. 41), by E. H. F. and C. L. W.

Pl. XLIV. North wall of north aisle, west half :

1. Figure (No. 42); seated Christ (No. 43); Magi, shepherds and Joseph (No. 44), with graffiti 6, 7 (Pl. VI).

2. The Magi, from No. 44, with graffito 6 (Pl. VI).

Pl. XLV. Annunciation to Shepherds and Adoration of the Magi (Nos. 44, 45), on north and east walls of north aisle, by E. H. F. and C. L. W.

Pl. XLVI, 1. East wall of north aisle: the Virgin in the Stable (No. 45).

2. East wall of added chamber F: three-headed Trinity (No. 56), with graffito 12 (Pl. VI).

Pl. XLVII. No. 56. The Trinity (No. 56), by N. G.

## LXI. CONSPECTUS OF THE MEMOIR ON THE OXFORD EXCAVATIONS IN NUBIA

### FIRST INSTALMENT, *Annals*, VIII.

#### *Faras, Prehistoric and Proto-dynastic.*

Introductory, course of the work, 1.

#### I. The Earliest Periods at Faras.

Faras, 1; names of hamlets, 2; tamarisk hills, 2; Sheikh Jebel, 2; Map, Pl. I.

Quartz palaeolith, 3; Pl. IV, 1, 2.

Prehistoric settlements in Lower Nubia, 3, 4.

#### II. The Proto-dynastic settlement and cemetery.

The settlement, 4.

The cemetery, 5; Pls. II-V.

Contents of Pls. IV, V, p. 18.

### SECOND INSTALMENT, *Annals*, VIII. (See Errata, Vol. XIII, p. 36.)

#### *Faras, C-group, Middle and New Kingdoms.*

#### III. Nubia from the Old to the New Kingdom.

The Old Kingdom in Nubia, 65; the C-group, 66.

Wawat, Meja, Cush; the Twelfth Dynasty, 69.

Kerma civilisation, 70; the New Kingdom, 71.



- iv. The C-group cemetery at Faras, 72 ; Pls. IX-XV (erratum on p. 104).
- v. The Middle Kingdom Fort at Faras, 80 ; Pl. XVI.  
Conical pots (moulds ?), 81 ; Pl. XXVI.
- vi. The New Kingdom at Faras, 83.  
The Hathor Temple, 84 ; Pls. XVII-XX, XXIII, XXIV, 1-10.  
Grotto of Setau, 87 ; Pl. XXIV, 11-13.  
Abeshek, 88.  
Temple of Ramesses II, 89 ; Pl. XXV, 1-6.  
Temple of Thutmosis III, 89 ; Pl. XXV, 7-47.  
Temple and fortress Sehtep-entêr of Tutankhamun, 91 ;  
Pls. XVII, 1, XX, 2, XXI, XXII, c, d, XXVI-XXVIII.  
See also xxxi, Supplementary note on the temple of  
Tutankhamun (the treasure-chamber) in Vol. XI, p. 143 ;  
and *ibid.*, Pl. XIV, for a plan of the whole settlement in the  
middle of the Meroitic cemetery.  
New Kingdom graves, 94.  
Group-statue of Tutankhamun (?), 95 ; Pl. XXII, d, XXVIII, 4.
- vii. Notes on New Kingdom remains at Serra, 97 ; Pl. XXIX.  
Contents of plates, 101.  
Erratum, 104.

THIRD INSTALMENT, *Annals*, IX. (See Errata, Vol. XIII, p. 36.)

*Sanam, Ethiopian Monuments.*

Napata, course of the work.

viii. Nubia in the 'Libyan Period.'

Lower Nubia, 68 ; Upper Nubia, 68.

The Libyan dynasty of Piankhy, etc., 68.

ix. Napata and Barkal, 72.

Sanam and Marawi or Merowe, 74 ; Map, Vol. X, Pl. XI.

x. Barkal and Sanam, or Napata and Contra-Napata, 77.

The Louvre stela of Aspelt, 78.

xi. Sanam Temple, 79 ; Pls. IV-XLIX. Map, Vol. X, Pl. XII.

Meroitic remains, 85 ; Pl. XII, 1, 2.

xii. Finds in the Temple, 86 ; Pls. X-XXII.

xiii. Sculptures, etc., exterior, 92 ; Pls. XXIII-XXXVII.

xiv. Sculptures, etc., interior, 101 ; Pls. XXXVIII-XLIX and some earlier.

(Shrine of Aspelt, 107 ; Pls. XLIV-XLVII).

- xv. The Treasury, 114 ; Pls. L-LIII ; Map, Vol. X, Pl. XII.
- xvi. The antiquities from the Treasury, 118 ; Pls. LIV-LXII.
- xvii. Antiquities from the Town-site, etc., Ethiopian period and Christian, 124 ; Pl. LXII, 11-13.

FOURTH INSTALMENT, *Annals*, X. (See Errata, Vol. XIII, p. 36.)

*Sanam, Ethiopian Cemetery.*

- xviii. The Cemetery of Sanam, 73 ; Map, Pl. XI, Plan, Pl. XII.
- xix. The Graves, 76 ; Pls. XIII, XIV.
- xx. The age of the necropolis, 82.
  - 1. Staircase graves and mummies, 83.
  - 2. Extended and contracted burials, 87 ; Pl. XIX.
- xxi. Vessels in stone and bronze, 90 ; Pls. XV, XVI, XXX, XXXI.
- xxii. Vessels in pottery and fayence, 94 ; Pls. XVI-XVIII.
  - The local wares, 102 ; Pls. XXXIII, XXXIV.
  - Fayence vessels, 104 ; Pls. XXXI, XXXII.
- xxiii. Instruments, tools, weapons, 104 ; Pls. XVI, etc., XXXV-XXXVII.
- xxiv. Decoration of the mummy, etc.
  - Personal ornaments, etc., 106 ; Pls. XXXVIII-XL, etc.
  - Amulets, pendants, beads, 110 ; Pls. XLIV-LXV, etc.
  - Scarabs, etc., with royal names, 110 ; Pls. XLI-XLIII.
  - Ostrakon of accounts, inscriptions, etc. ; Pls. XXXIII, 9, LXVI.
- xxv. Contents of the plates, 115.
- xxvi. Catalogue of the illustrated graves, 142 ; Pls. XX-XXIX and *passim*.
  - For grave 396 with Syrian seal, see Hogarth, *Engraved Hittite Objects* in *Journal of Egyptian Archaeology*, VIII, p. 215 and Pl. XXV.

FIFTH INSTALMENT, *Annals*, XI.

*Nubia after the New Kingdom ; Meroïtes, etc.*

- xxvii. The pre-Meroitic historical gap in Lower Nubia.
  - Earlier gaps in the history, 115.
    - (a) From the New Kingdom to the Ptolemies, 115.
    - (b) The Dodecaschoenus and Ptolemaic power in Nubia, 117.
- xxviii. The Meroitic Kingdom, c. 300 B.C.-c. A.D. 300, 119.

- XXIX. Blemmyes and Nubians, 123.  
c. A.D. 250 onwards, 124.

SIXTH INSTALMENT, *Annals*, XI. (See Errata, Vol. XII, p. 172,  
Vol. XIII, p. 36.)

*Faras, Meroitic Cemetery, I.*

- xxx. The Meroitic cemetery at Faras, 111; Plan, Pl. XIV, Map, Vol. VIII, Pl. I.
- xxxi. [Supplementary note on the temple of Tutankhamun (the treasure-chamber), see above under vi.]
- xxxii. Meroitic and other pagan burials.  
Four periods distinguishable, 144.
- xxxiii. Description of the plates.  
Plan, 147; Pl. XIV.  
Types of pottery vessels, 147; Pls. XV-XXXI.  
Types of glass vessels, 153; Pl. XXXI.  
Types of bronze vessels, 153; Pl. XXXII.  
Designs on jars, 154; Pl. XXXIII.  
Plans and views of graves, 154; Pls. XXXIV-XXXIX, LXXI.  
Objects from early cave graves, 156; Pl. XL.  
Pottery, 157; Pls. XLI-LII, LXXI.  
Bronze and metal objects, 163; Pls. LIII-LVII, LXIX, LXXI.  
Stone utensils, 166; Pl. LVII.  
Jewellery, ornaments and scarabs, 166; Pls. LVIII-LXI, LXXI.  
Beads and pendants, 172; Pls. LXII-LXIII, LXX.  
Ivory inlays, etc., 174; Pl. LXIV.  
Stelae and sculptures, 175; Pls. LXV-LXVIII.  
Inscriptions, 177, 179; Pls. LXIX, 4; LXXII.  
For the Meroitic tomb-inscriptions from Faras, see Griffith, *Meroitic Funerary Inscriptions from Faras, Nubia*, in *Recueil d'études égyptologiques dédiées à la mémoire de J.-F. Champollion*, 565-600.

SEVENTH INSTALMENT, *Annals*, XII. (See Errata, Vol. XIII, p. 37.)

*Faras, Meroitic Cemetery, II.*

- xxxiv. Classification of the Meroitic graves at Faras, 57.  
1. Cave graves, 57; anklet-graves the earliest, 58; later class, 60.

2. Lateral-niche graves, 61.
  3. Graves with foot-niche, 62.
  4. Rectangular graves, 62.
- xxxv. Graves with superstructures, shrines and other accompaniments, 63.
- Early mastabas, 64.
  - Later mastabas, 65.
  - Sculptures and inscriptions, 67.
- xxxvi. X-group graves and the contracted burials, 69.
- Some contracted burials not X-group, 71.
- xxxvii. Supplementary remarks on the Meroitic cemetery.
- Richness of deposits, 72.
  - Pottery of the Meroitic graves, 73.
  - Bronze, solder, pewter and iron, 76.
  - Objects of stone and glass, 78.
  - Amulets and beads, 78.
  - Shells, 79.
  - Re-use of earlier objects, 79.
- xxxviii. Contents of the supplementary plates.
- Enamelled jewellery and modern forehead pendant (*gōzeramān*), 80 ; Pls. XX, XXI.
  - Views and plans of graves ; Pls. XXII, XXIV.
  - Pottery ; Pls. XXII, XXIII, XXV, XXVI.
  - Various metal objects, etc. ; Pls. XXII, XXIII, XXVI, XXVII.
  - Inscriptions, symbols, sculptures ; Pls. XXVI-XXVIII.
- xxxix. Catalogue of the illustrated graves, 85.
- Objects figured without grave numbers, 172.
  - Errata, 172.

EIGHTH INSTALMENT, *Annals*, XIII. (See Addenda,  
Vol. XIV, p. 113.)

*Various Meroitic Remains.*

- XL. Meroitic antiquities at Faras and other sites.
- Faras in Meroitic times, 17. See also, *Pakhoras-Bakharâs-Faras in Geography and History in Journal of Egyptian Archaeology*, XI, 259-268.
  - Remains north and south of Faras, 18.

Graves at Sanam (Napata), 19 ; Pl. XII.

Graves at Meroë, 20 ; see Vol. XIV, p. 113.

Burial in New Kingdom tomb at Faras, 20.

Dwellings at Faras, 21.

The Western Palace, 21 ; Pls. XIII-XXI. For the ostraca from the Western Palace, see my *Meroitic Studies*, V, in *Journal of Egyptian Archaeology*, XI, 218-224.

Other finds, 23.

XLII. The fortified enclosure, 25 ; Pls. XXI, 5-10 ; XXII-XXX.

Gateway at Sheikh Daûd, 29 ; Pl. XXVIII, 4-6.

XLIII. Contents of Plates.

Errata (Vols. VIII-XII), 36.

NINTH INSTALMENT, *Annals*, XIII. (See Addenda,  
Vol. XIV, pp. 113-116.)

*Nubian Christianity ; Faras Churches.*

XLIII. A symbol of Isis-worship from the Enclosure, 49 ; Pl. XXXVII, 6.

XLIV. Christianity in Nubia.

History, 50.

Churches, 52.

Language, 53.

Writing, 53.

XLV. The Christian antiquities of Faras (Pachoras) and the work of the Expedition ; see also *Pachoras-Bakharâs-Faras in Geography and History in Journal of Egyptian Archaeology*, XI, 259-268.

XLVI. Christian remains in and about the Enclosure.

(1) The Citadel and its Church, 57 ; Pls. XXXI-XXXV.

(2) The Great Church, 59 ; Pls. XXXVI, XXXVII, XL, 1.

(3) Other remains inside the Enclosure, 61 ; Pls. XXXVII-XXXIX.

(4) The Nabindiffi Church, 62 ; Pls. XXXIX, 2, XL, 2, 3, XLI, 1.

(5) The Potteries, 63 ; Pls. XLI, 2, 3, XLII-XLV.

XLVII. The Church by the Rivergate.

(1) Architecture, etc., 66 ; Pls. XLVI-LIII.

(2) Paintings and Graffiti, 73 ; Pls. LIV-LXI, LXIV, LXV.

(3) Finds, 83 ; Pls. LXII, LXIII.

XLVIII. Contents of Plates.

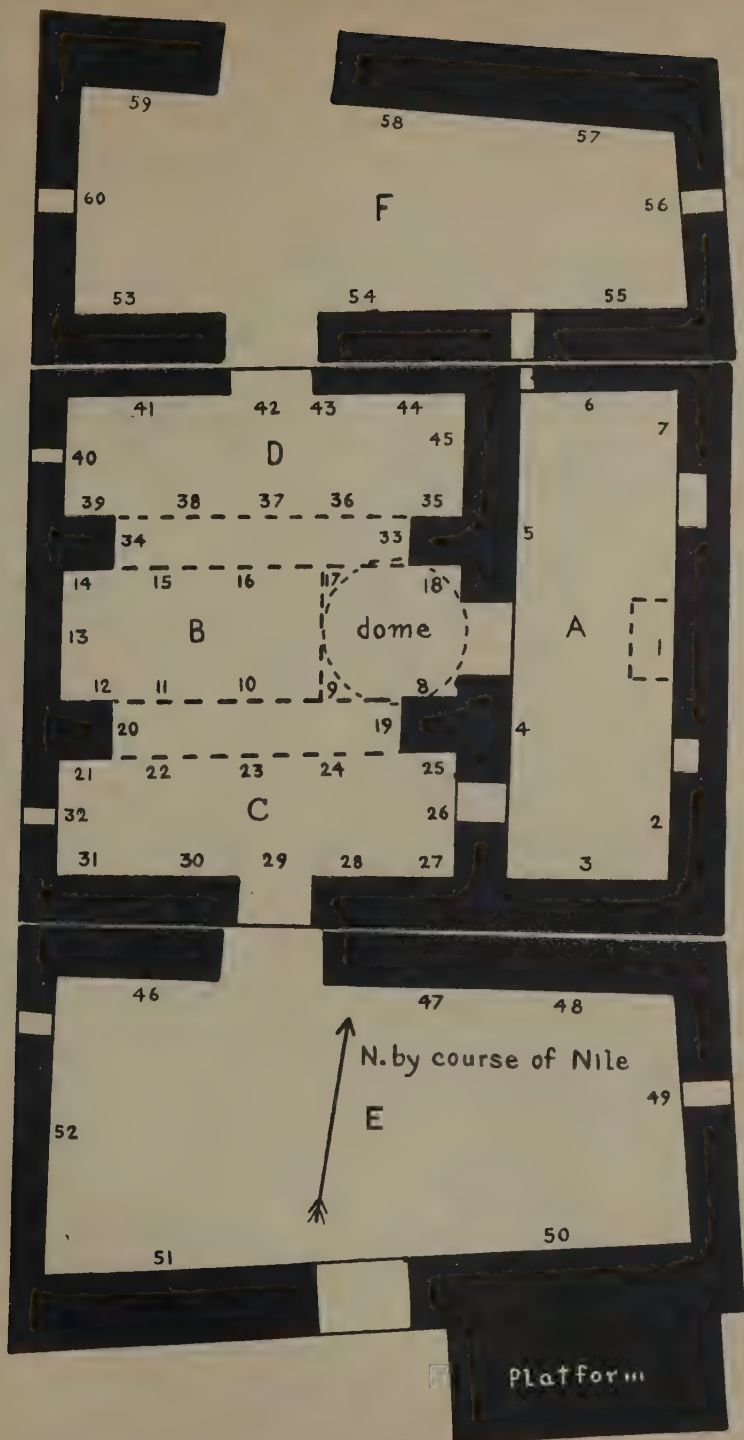


TENTH INSTALMENT, *Annals*, Vol. XIV.*Faras, Churches (continued) and Cemeteries ; other sites.*

- XLIX. The Church on the Meroitic mastaba-field, 57 ; Pls. XL-XLIII.  
 Finds, 61 ; Pls. XLII, XLIV.
- L. Christian graves in the Meroitic cemetery, 62 ; Pls. XLV-LI.
- LI. The Western cemeteries and graves, 67 ; Pls. LI, 6, LII-LXI.
- LII. The Anchorite's grotto, 81 ; Pls. LXII-LXXIII.
- LIII. Supplementary notes on the Christian remains at Faras, 92.  
 Map of Faras, Pl. LXXX.  
 Graves and tombstones, 92.  
 The Northern Church and the Southern Church of Mileham,  
 93 ; Pl. LXXIV, 2.  
 Sheikh Jebel, 94 ; Pl. LXXIV, 3, 4.  
 Wizz, 94 ; Pls. LXXIV, 1, LXXV, 1.  
 Tombstone of the bishop, 94.  
 Modern women-potters, 97 ; Pl. LXXV, 2.
- LIV. Adendān, Serre and other Christian sites near Faras.  
 Map, 97.  
 Adendān, 97 ; Pl. LXXV, 3, 4.  
 Serre, 98 ; Pls. LXXVI-LXXIX.  
 Historical and geographical notices, 102.
- LV. Description of the Plates, 103.  
 Addenda to Vol. XIII, 113.

ELEVENTH INSTALMENT, *Annals*, Vol. XV.*The Church at Abd el-Gādir.*

- LVI. The Church at Abd el-Gādir near the Second Cataract, 63.
- LVII. Architecture, decoration and inscriptions, 65.
- LVIII. Catalogue of the paintings, 69.
- LIX. General conclusions, purpose, date, paintings (position of subjects ; characteristic figures), 78.
- LX. Contents of Plates, 80.
- LXI. Conspectus of the memoir on the Oxford Excavations in Nubia, 82.



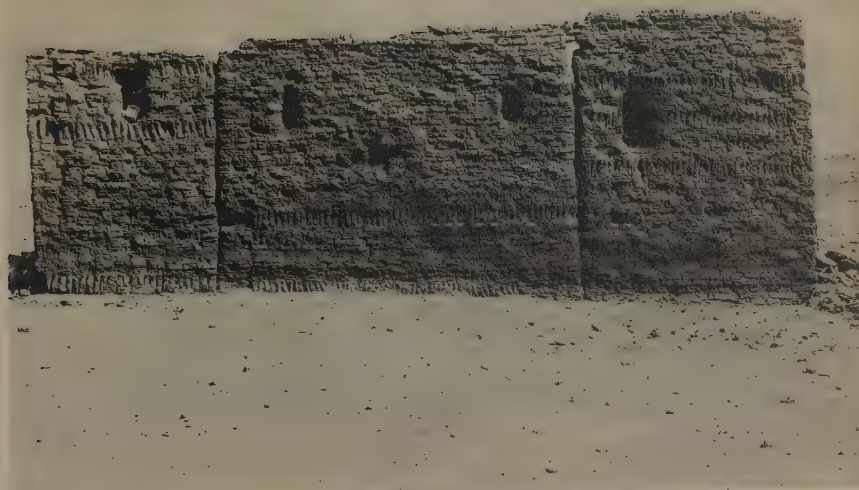
PLAN OF THE CHURCH OF ABD EL-GĀDIR. Scale 1:50.





THE CHURCH OF ABD EL-GĀDIR.  
1. from north-west; 2. from south-east.

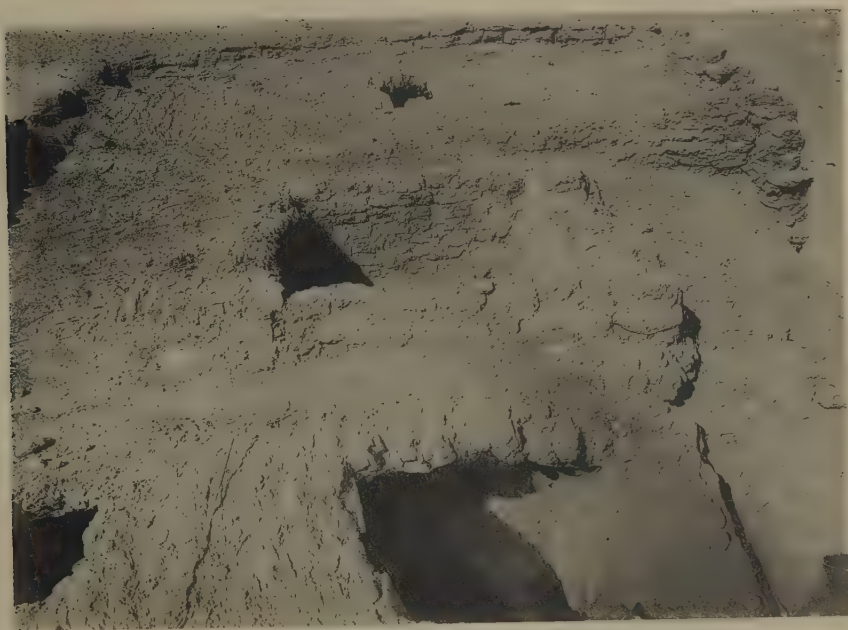




THE CHURCH OF ABD EL-GĀDIR.  
1. west end; 2. east end.







THE CHURCH OF ABD EL-GĀDIR.

1. Interior door and arch; 2. view over roof.







1 + ΤΟΥ

4 + ΦΙΛΙ ΠΑΡΧΗΕ  
ΦΑΙΛΑΨΑ

5 + ΦΩΣΙΠΑ

2 + ΑΪΜΑΣΚ

ΙΜΕΝΑ

ΤΟΤ

3 + ΤΟΥ

ΟΙΚ. ΕΥΦΡΟΣ

ΦΩΝΕΥΕΝΟΥΚΕ end

6 + ΕΝΤΗ ΕΛΛΕΥΟΥΑΟΥ

ΟΤΑΝ ΕΝ ΜΝΗΘΗΝ ΚΕ ΕΓΩ

ΔΟΛ ΑΜΝ ΤΟΤ ΠΑΕΙΣΕΛΟ

7 + ΙΣ Ο ΧΕ

ΕΓΩ ΟΝΗ  
ΓΡΑΨΟΝ

8 + ΑΙΕΙ ΤΑΚΙΤΑ

9 + ΕΜΜΗΙ ΓΕ

10 + ΠΕ  
ΠΑΤΟΝ

11 + ΑΤΕ ΕΒΑΣΙΛΕ

ΟΤ Ν ΤΟΣΜΕΝ

ΤΑΝΚΗ ΙΣ

ΕΝΔΡΑΨΟΝ

12 + ΚΕΘΟΣ ΑΤΙΣ

ΠΑΔΑ ΑΤ  
ΠΙ ΔΙΠΠΙ ΤΩ ΠΑΡΑ  
ΤΑ ΔΙ ΤΕΝΝ  
ΜΟ ΔΑΥΑ

a ΙΑΗΙ

ΔΑΡΓΟ

b FYDIAΠI

ΜΑΗΟΣ

ΣΒΟΓΕΑΤΤ

c FYEDIAΠB

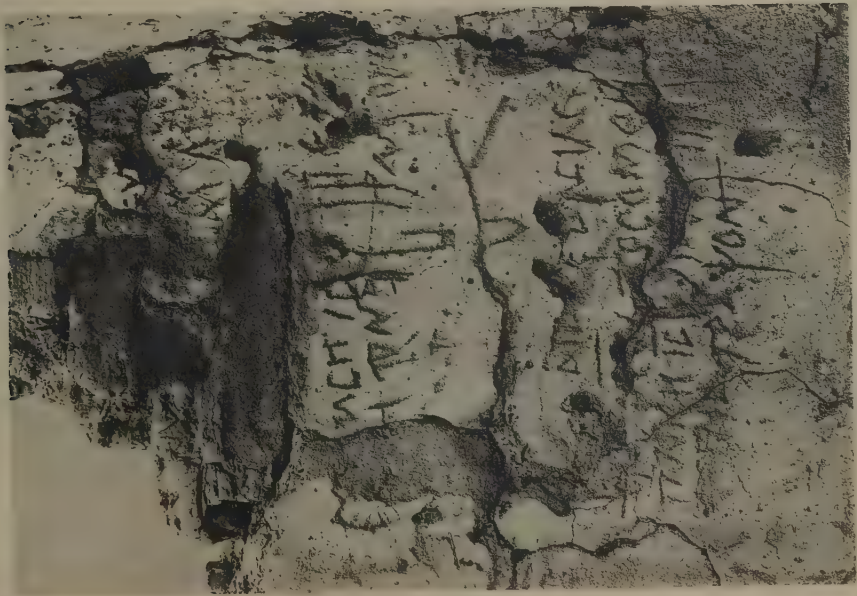
ΠΕ' 1820







2. PAINTINGS, 11-12.



1. INCISED GRAFFITI, 9-11.





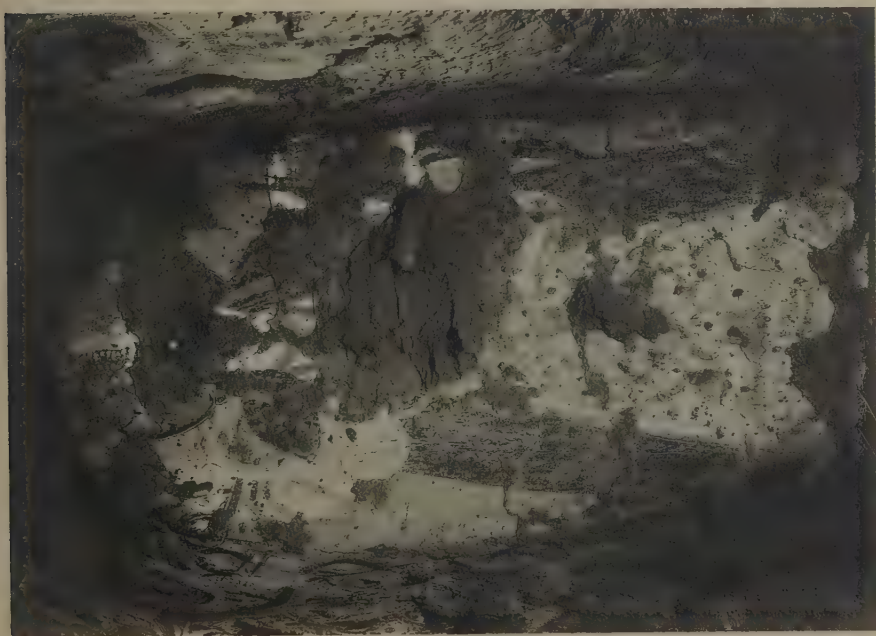
PAINTING 12, THE EPARCH.







2. PAINTING 26.



1. PAINTING 18.







1



2

1. PAINTINGS 27-29.

2. PAINTINGS 29-31.





PAINTING 30, SAINT MERCURIUS.





PAINTING 31.







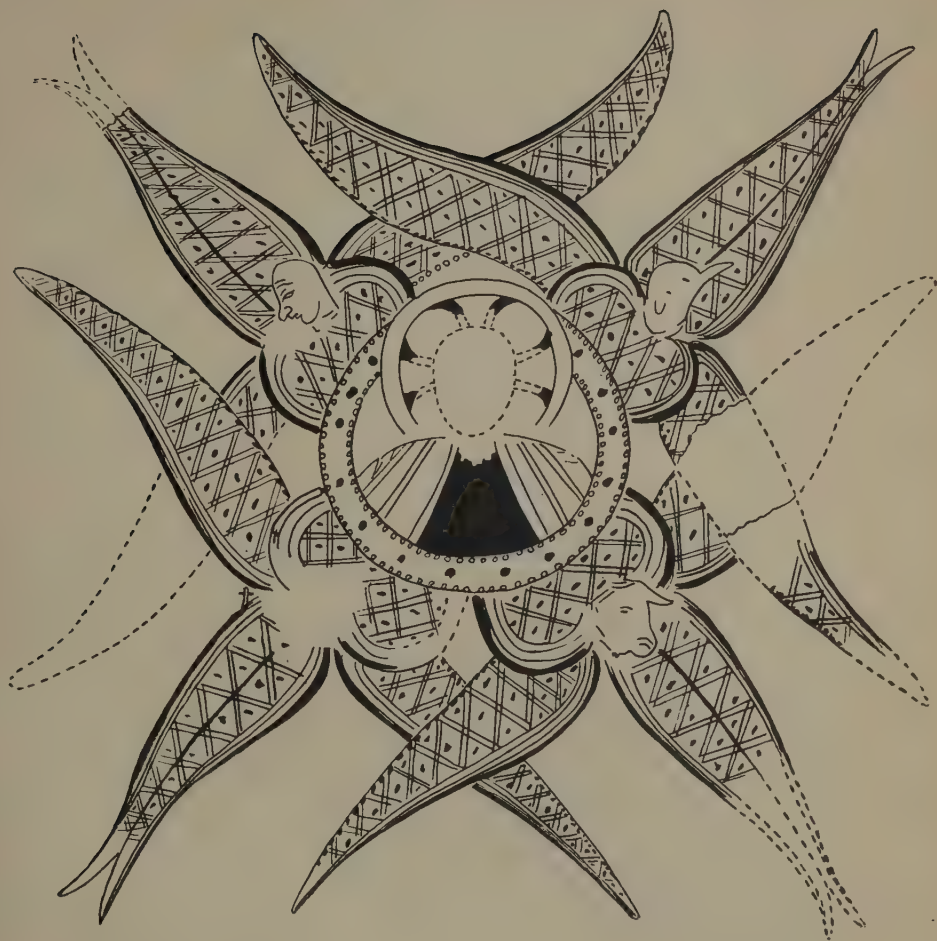
PAINTINGS 31, 32.





PAINTING 32, THE CHILDREN IN THE FURNACE.

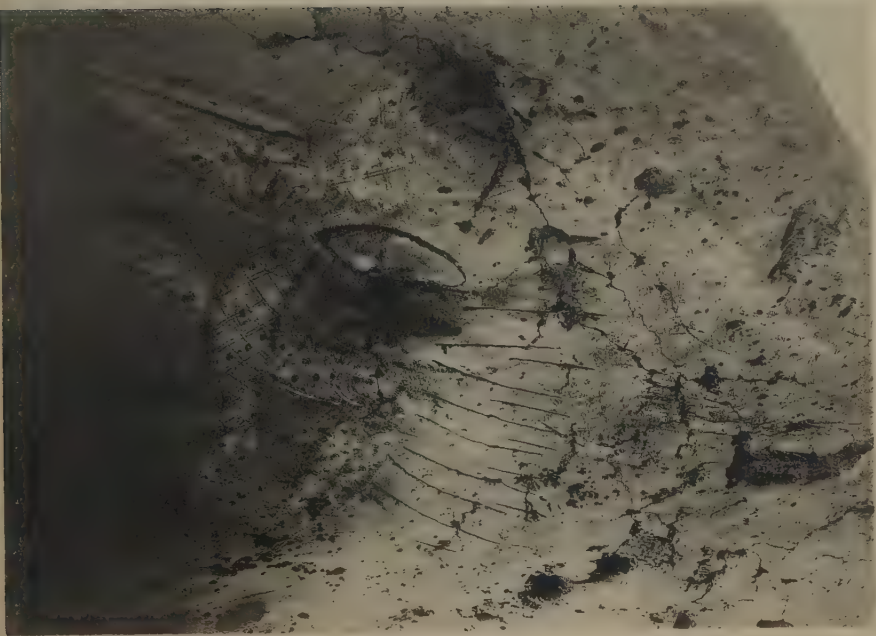




PAINTING 36, CHRIST AND THE GOSPELS.







1. PAINTING 36.



2. PAINTING 37.



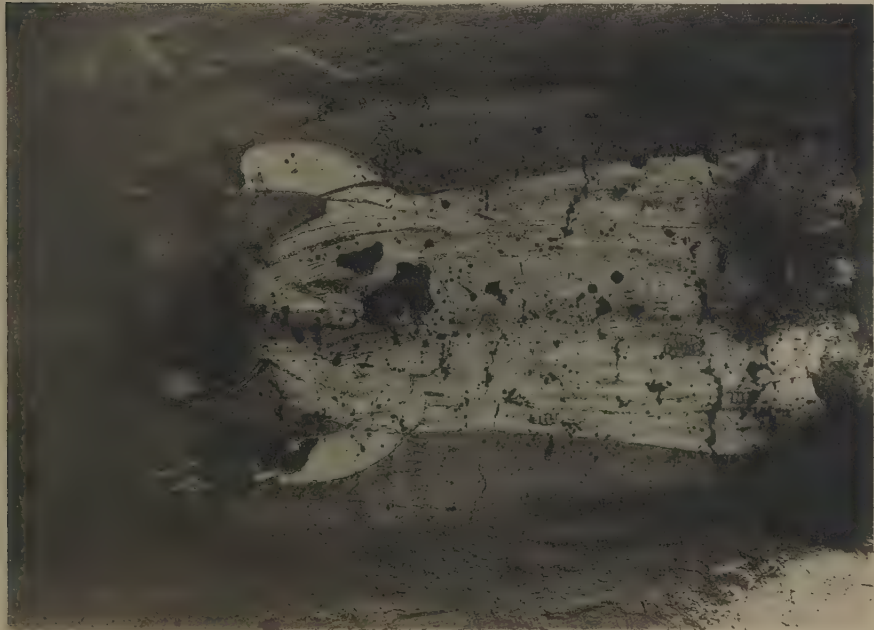


PAINTINGS 37-39.





2. PAINTING 41.



1. PAINTING 40.

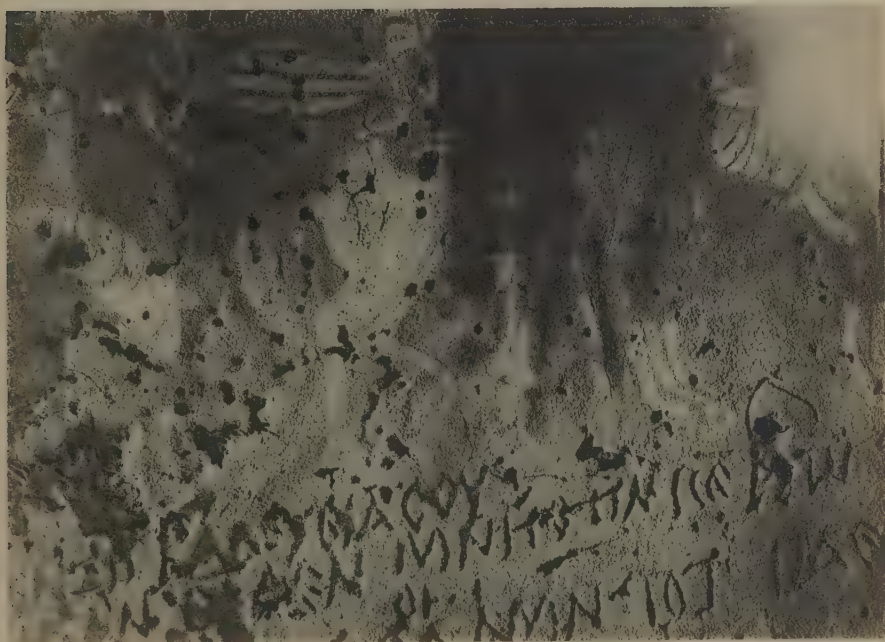
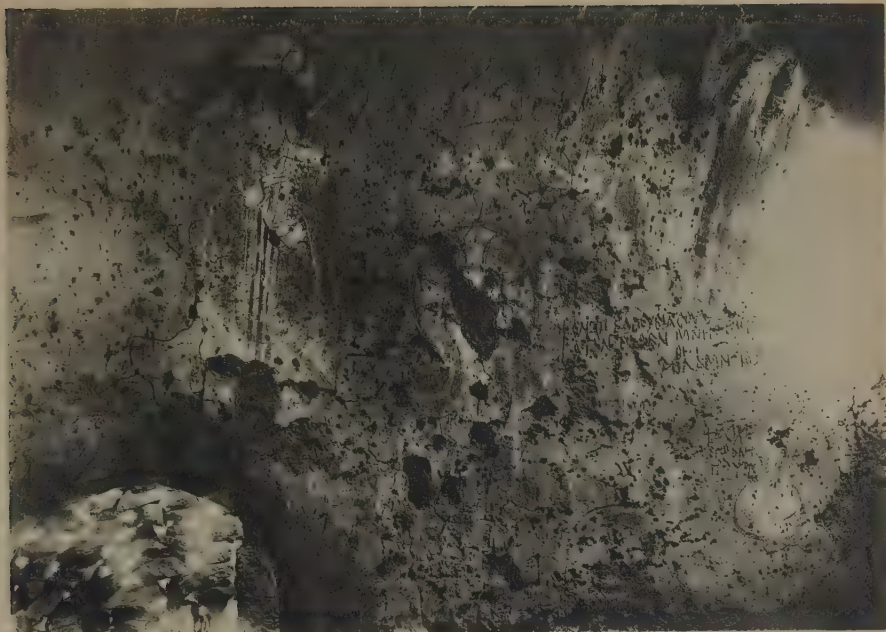






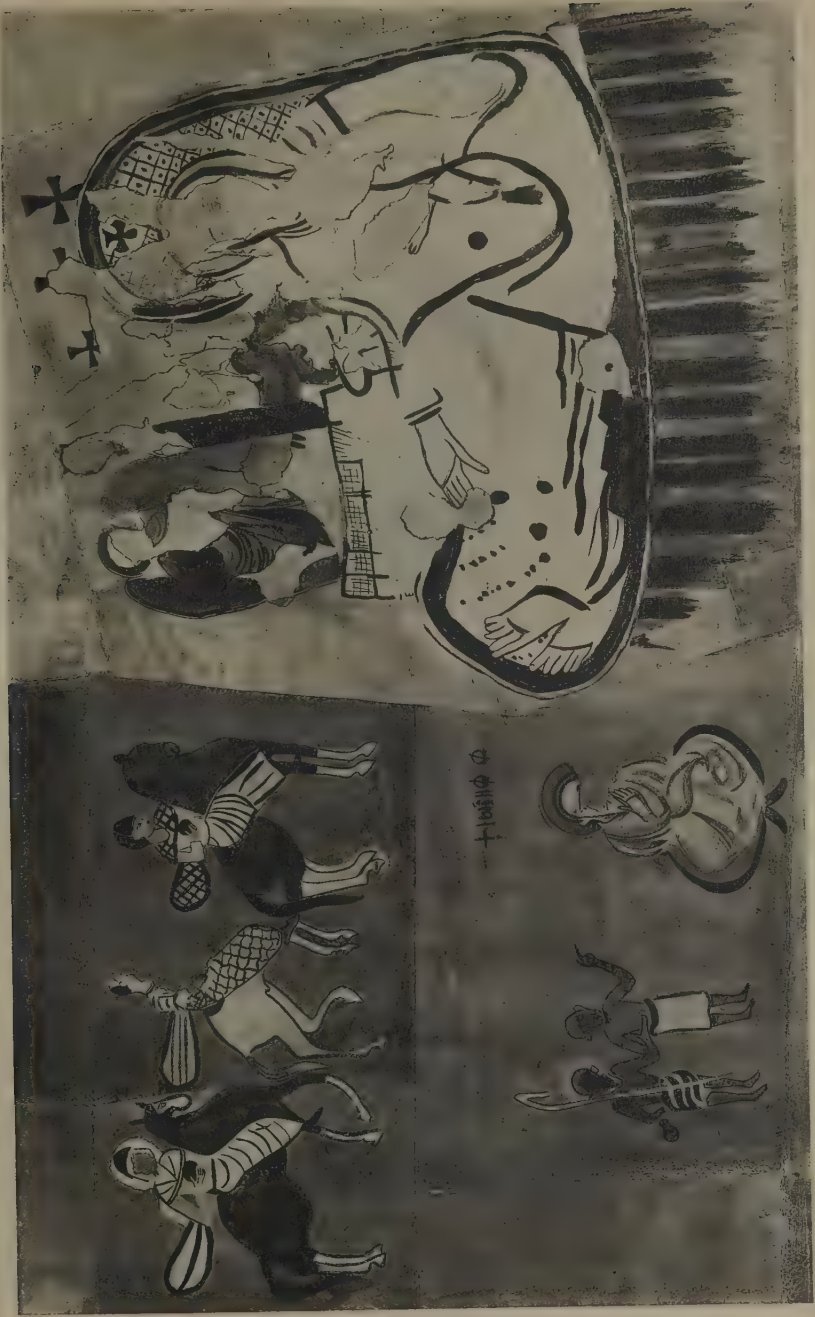
PAINTING 41 (ST. GEORGE).





1. PAINTINGS 42-44; 2. PAINTING 44, THE MAGI.

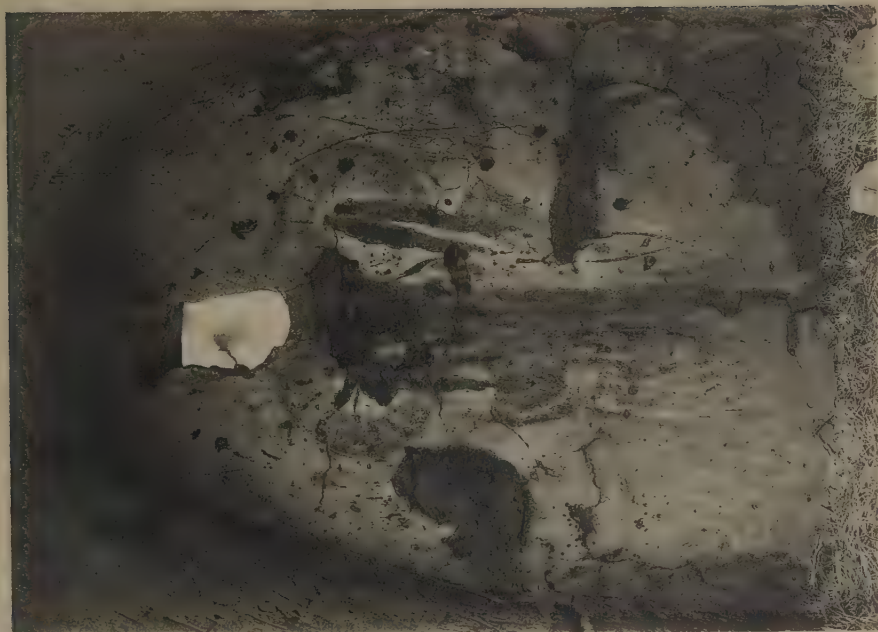




P. 44-45, HOLY FAMILY, MAGI AND SHEPHERDS.



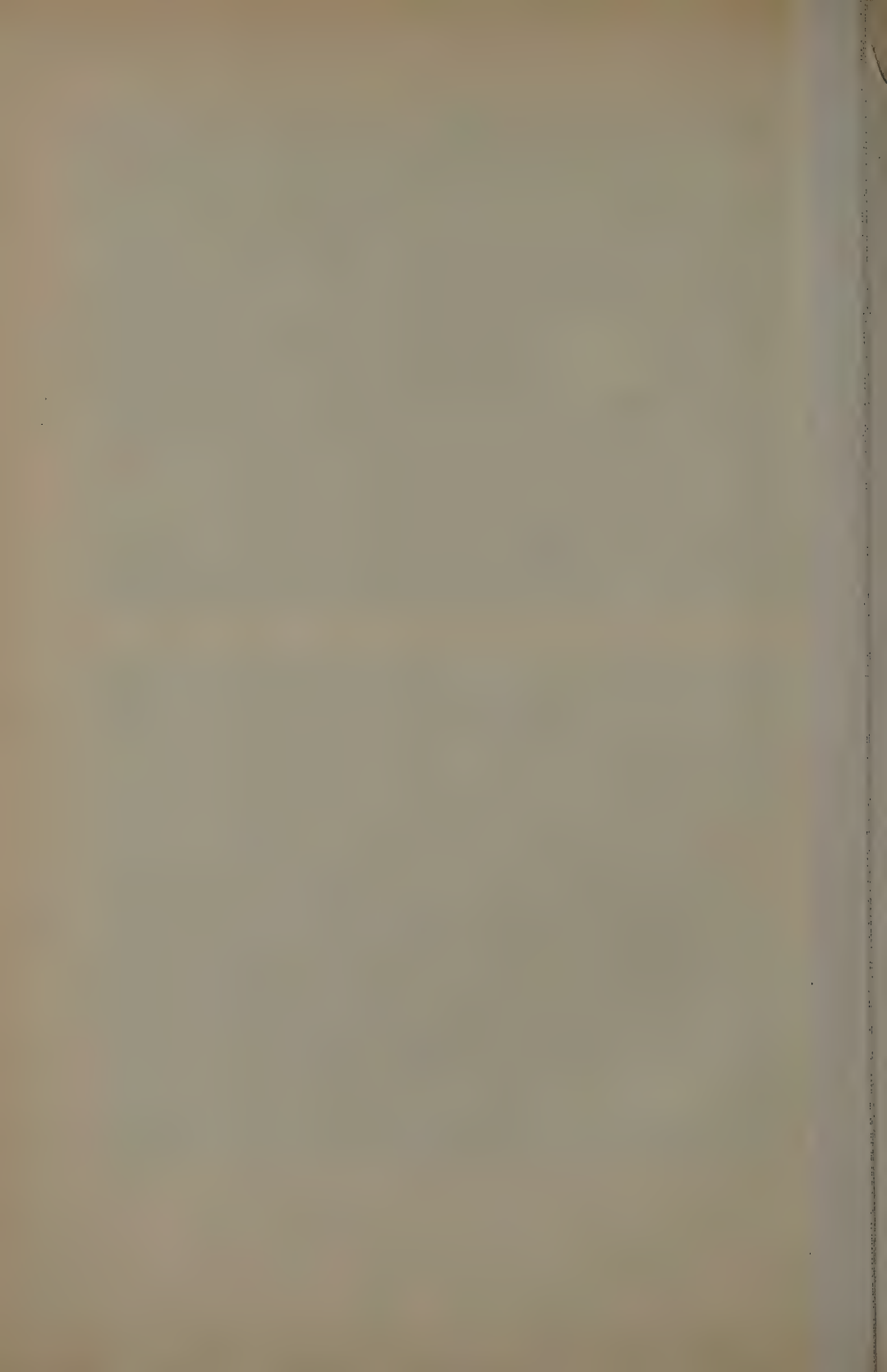




2. PAINTING 56.



1. PAINTING 45.





PAINTING 56, THE TRINITY.



## DEFENSIVE ARMOUR IN HOMER

## With a Note on Women's Dress

BY H. L. LORIMER

WITH PLATES XLVIII-L

διὰ δεῦτε Καρικουργέος ὀχάνοιο χεῖρα τιθέμενοι.—ANACR. fr. 81.

καὶ γὰρ ἐπὶ τὰ κράνα λόφους ἐπιδέεσθαι Κᾶρές εἰσι οἱ καταδέξαντες  
καὶ ἐπὶ τὰς ἀσπίδας τὰ σημήια ποιεῖσθαι, καὶ ὄχανα ἀσπίσι οὗτοί εἰσι  
οἱ ποιησάμενοι πρῶτοι· τῶς δὲ ἄνευ ὀχάνων ἐφόρεον τὰς ἀσπίδας  
πάντες οἵπερ ἐώθεσαν ἀσπίσι χρᾶσθαι, τελαμῶσι σκυτίνουσι οἰκίζον-  
τες, περὶ τοῖσι αὐχέσι τε καὶ τοῖσι ἀριστέροισι ὤμοισι περικείμενοι.

HEROD. i. 171.

THE passage from Herodotus quoted above received a new importance when on certain finds from Schliemann's excavations at Mycenae a pre-Hellenic type of armature was identified which included a great body-shield slung on a telamon from the left shoulder and having no blazon. Helbig<sup>1</sup> as early as 1884 pointed out that the figures on the Lion Hunt Dagger-blade, the gold bead-seal with the duel, and other small objects from the Shaft-graves admirably illustrated certain passages in the *Iliad*; but the first to investigate systematically the relation of the Homeric poems to the products of Mycenaean art, as it was then called, was Wolfgang Reichel, whose treatise *Homerische Waffen* appeared in 1894. The first edition was soon exhausted; but the criticisms it received induced the author to subject his work to a thorough revision which was still incomplete when he died in 1901. The sections on defensive armour had however received for the most part their final form, and have been the basis of all subsequent discussions of the subject. His view that the 'Mycenaean'

1. The following works, which are frequently referred to, are cited by the name of their authors only:—

Helbig. *Das Homerische Epos aus den Denkmälern erläutert*, 2nd ed., 1887.  
Schuchhardt. *Schliemann's Excavations*, translated by Eugénie Sellers, 1891.  
Reichel. *Homerische Waffen*, 2nd ed., 1901.  
Bossert. *Attekreta*, 2nd ed., 1923.  
Rodenwaldt. *Der Fries des Megarons von Mykenai*,



armature of the gold bead-seal<sup>1</sup> was the proper equipment of the Homeric warrior and that practically every divergence from it was the result of eighth-century interpolation was extreme and untenable. More attention to the material of the later Mycenaean age might have saved him from this error; but it must be remembered that at that date much of the very important sub-Mycenaean material now available was unknown or unrecognised, and the chronology of the whole Mycenaean Age, which has now removed the Shaft-graves to a remote antiquity, was then unfixed.

That an unmistakable, if fading, 'Mycenaean' convention underlies the Ionian epic he established beyond all reasonable doubt, and this is one of the very few facts known to us that affords any solid basis for speculation on the rise and character of pre-Ionian heroic poetry in Greek lands.

It might be supposed that to illustrate the material civilisation of the Homeric poems, there could be no occasion to go back beyond the monuments of the thirteenth century, or at most beyond 1400, the date which marks approximately the opening of the Third Late Helladic period, within which falls the Siege of Troy. The monuments which Reichel adduced in support of his theory cover a considerable period, but the later of them merely show the figure-of-eight shield as a decorative motive still possessing perhaps a religious significance, and afford no presumption of its use in warfare. Those which show the shield in actual use by human beings come mainly from the Shaft-graves, which, now that Crete has supplied the elements of the pre-Hellenic chronology of the Aegean, are known to cover the period from *circa* 1600–*circa* 1525, and number only about half a dozen; like all the artistic objects from the Shaft-graves, they are the products of Minoan art, or are at least profoundly influenced by it. The later periods on the mainland yield only the scantiest evidence of its continued use.<sup>2</sup> Considering the paucity of the monuments, this might well be regarded as the result of accident, were it not that in L.H. III we have evidence for the appearance on the Greek mainland and also at the

---

1. Pl. XLVIII, 2.

2. A glass paste gem from Vaphio, a site whose remains belong to the second half of the sixteenth century, shows a human being with a figure-of-eight shield contending with a lion. A ring from Boeotia (*J.H.S.*, XXV, p. 26, fig. 30), and a gem from Crete (Furtwängler and Loeschke, *Myk.-Vasen*, Textb., Pl. E. 30; Reichel, p. 4, fig. 12), each engraved with a duel of two human beings, belong to the Third Late Minoan period, and one still later was found by Mr. Forsdyke in his excavations near Knossos in 1926. Minoan shields in Crete cause no surprise; and Cadmus, surely a Minoan figure, reached Boeotia, according to the genealogists, about 1400.

east end of the Mediterranean of a new equipment, of which the chief features are a small and in the eastern region a round shield, and a sort of corslet or jerkin to protect the chest.

The evidence points therefore to the disuse, at any rate in the Peloponnese, of the Shaft-grave equipment at some date between 1500 and the middle of L.H. III—say *circa* 1250; and to the literary and textual difficulties of Reichel's thesis that the original armature of the Homeric poems was exclusively of this type is added the historical difficulty of accounting for its survival at all in a poem whose very prototype cannot have arisen before the twelfth, thirteenth, or on the earliest traditional dating for the Siege of Troy, that of Duris, 1334, the latter part of the fourteenth century.

The fact that no shield was found in the richly furnished Shaft-graves shows that its material at this date was perishable. The structure of the figure-of-eight shield is best illustrated by the shield-fresco from the earlier palace at Tiryns,<sup>1</sup> now believed by the German excavators to be not earlier than L.H. III. This frieze has probably a religious as well as a decorative value. Points to be noted are :—

(1) The dappled hide, which may be compared with representations of bulls in frescoes or on pottery. (See Bossert, 218 and 264.)

(2) The probably metallic rim, where the dappling ceases.

(3) The double row of stitching, suggesting that there are at least two layers of hide.

(4) The apparent doubling or strengthening of the leather down the median line, which can also be seen on the shields illustrated, *Palace of Minos*, I, pp. 308 and 694, Figs. 227 b and 516, and II, p. 52. Sir Arthur Evans is inclined to regard this elongated boss as originating in a combination with a parrying-stick.

The monuments from the mainland which show the body-shield in actual use by human beings are as follows :—

(1) The Lion Hunt dagger-blade from Shaft-grave IV.<sup>2</sup> Here we have both types of body-shield. The figure-of-eight type shows again the dappled hide and the probably metallic rim, and also a new and interesting feature, the telamon or baldric passing over the left shoulder, by which the shield was wholly supported when it was thrown behind the back to leave the arms free.

The straight-sided or 'tower' type is usually, as here, somewhat

1. Pl. XLVIII, 1; *Tiryns*, II, Pl. V.

2. Schuchhardt, p. 229. Leaf, *Iliad*<sup>2</sup>, vol. i. p. 570.

smaller than the figure-of-eight type, and is derived from a short shield with a similarly arched top known in Crete just at the transition from M.M. III to L.M. I (*Palace of Minos*, I, p. 505, Fig. 363 b). The figure-of-eight seems to be derived from the 'ox-hide and coat-hanger' type of the Chieftain vase from Hagia Triada,<sup>1</sup> which in parade position almost touches the ground.

(2) A signet ring from Shaft-grave IV representing a battle in a glen with rocky sides. Here we have only the tower-shield.<sup>2</sup>

(3) A gold plaque-head from Shaft-grave III.<sup>3</sup> The subject in intaglio represents a duel in which a man armed with a rapier stabs his opponent over the top of a vast figure-of-eight shield. A double row of bosses on this follows very much the line of the double stitching on the shields of the Tiryns fresco, representing perhaps the heads of rivets which would necessarily replace or supplement stitching if the shield had a complete metal facing.

(4) A sardonyx from Shaft-grave III,<sup>4</sup> on which a combatant whose figure-of-eight shield is thrown behind him stabs with a rapier an opponent whose apparently similar shield is thrust to one side.

(5) A gold signet ring from Boeotia in the Ashmolean Museum,<sup>5</sup> on which two apparently bearded figures, carrying 'tower' shields, with numerous *ὀμφαλοί*, are engaged in a duel with spears; the ends of their sword scabbards are visible. The spears, one apiece, are markedly *κολλητά*; cf. O 678.

(6) The fragments<sup>6</sup> recently added to the fragmentary silver rhyton with the siege scene from Shaft-grave IV show a warrior ascending rocky ground with a figure-of-eight shield slung behind him. Some of the party under the walls<sup>7</sup> have shields slung on telamons which may be rather short versions of the tower type: they lack however the characteristic arched top.

(7) A tombstone from the Shaft-grave circle<sup>8</sup> on which a chariot is represented as driving over a small figure prostrate under a figure-of-eight shield. This is the only monument of the series certainly of local manu-

1. Bossert, p. 63, no. 88 a.

2. Reichel, p. 4, fig. 11. Evans, *P. of M.*, p. 691, fig. 513.

3. Reichel, p. 2, fig. 2.

4. Reichel, p. 3, fig. 5. Helbig, p. 313, fig. 119.

5. *J. H. S.*, 1925, p. 26, fig. 30.

6. Rodenwaldt, p. 26, fig. 15.

7. Reichel, p. 13, fig. 17.

8. B.S.A., XXV, Pl. XIX. Reichel, p. 12, fig. 16.

facture, and even here Minoan influence is marked, *e.g.* in the rock-work up the sides.

Examples of the second type of equipment are furnished by :—

(1) The Warrior Vase<sup>1</sup> from a house at Mycenae. The marching warriors on the obverse carry a small shield of a roughly circular shape with a segment cut out of the lower edge, and wear a sort of corslet and a helmet with a pair of horns. There is nothing to show how these warriors carry their shields : very similar warriors on the other side of the vase are apparently shifting their shields to a defensive position, and the rearmost shows a hand-grip which to judge by its position must have been combined with an arm-loop. It is impossible to say whether the shields of both parties are intended to be of the same type or not. The fact that the fragment of inside border seen on the hand-grip shield is identical with that on the shields of the marching warriors suggests that they are.

It is remarkable that on the Forman lebes, a r.f. vase of fine style in the British Museum,<sup>2</sup> an Amazon is represented with a helmet with horns and ears and a shield of this shape with both arm-loop and hand-grip, of which the ordinary Amazon crescent shield is apparently an attenuated version. Possibly this type of armour belonged to Thrace or north-west Asia Minor, and survived there.

(2) The Warrior Stele,<sup>3</sup> on which warriors are painted in the style of the Warrior Vase, reproduces exactly, so far as can be seen, the warriors of the reverse of the vase ; the paint however has faded badly and in great part disappeared. It is a more than plausible conjecture that both representations are derived from a fresco in the palace, they suggest an original on a large scale.

The fact that the Stele was found covering the interment pit in a chamber tomb of the latest type at Mycenae shows that though relatively late in style it does not belong to the last days of the city ; it must have served its original purpose before being transferred to the chamber tomb. Hence it may reasonably be dated to about 1200-1150 B.C. The armature portrayed has some claim to represent the Achæan equipment actually worn at the Siege of Troy, and the wearers the Achæans who ruled at Mycenae for at least a generation or two before the Trojan War.

1. Pl. XLVIII, 3 ; Furtwängler und Loeschke, *Myk.-Vasen*, Taf. XLII, XLIII.

2. Pl. XLVIII, 4 ; Furtwängler und Reichhold, *Gr. V.*, Pl. LVIII.

3. *Eph. Arch.*, 1896, Pl. I.

A vase fragment of L.H. III style <sup>1</sup> shows exactly the same type of warrior, with beard but shaven upper lip, gaiters, chiton, and something that suggests a laced jerkin.

(3) A vase fragment representing two warriors in a chariot, each carrying a round shield.<sup>2</sup>

(4) A vase fragment from Tiryns with figure decoration in the sub-Mycenaean style, which appears contemporaneously with cremation, with iron weapons (knives and spear-heads), and with the bowed or stilted fibula, the successor of the fiddle-bow, the earliest type. It is barbaric beyond the lowest depth touched by the Late Mycenaean or Helladic style, yet still faintly reminiscent of the fresco style. The Tiryns fragment <sup>3</sup> shows two warriors wielding by a hand-grip a small round targe which has neither arm-loop nor telamon; consistently with this, only one spear is carried.

This appears to be all the evidence which the mainland affords for the equipment current in L.H. III; but Egyptian and Cypriot monuments afford evidence of a kindred though not identical equipment as characteristic of Asia Minor and the eastern end of the Mediterranean.

An ivory mirror handle from an Enkomi tomb <sup>4</sup> shows a warrior in conflict with a griffin. He carries a round shield slung on a telamon, and uses a narrow rapier with well-marked mid-rib of the Shaft-grave type; his helmet, though incomplete, seems also to be of a type known from Mycenae, *i.e.* that worn by two of the combatants in the Battle of the Glen. He wears however another piece of defensive armour of a type unknown in Greece, which would hardly be recognised as a corslet without the aid of Egyptian monuments which show the same article of equipment worn by the Pulesati or Philistines and Shardana engaged in the great advance upon Egypt by way of the Syrian coast in 1194 B.C. A somewhat earlier example of the same type of equipment is afforded by the Shardana mercenaries employed against the Hittites by Ramses II, in 1288 B.C. The figure reproduced,<sup>5</sup> which wears the Egyptian loin-cloth

1. Rodenwaldt, p. 24, fig. 14.

2. Pl. XLVIII, 5; Furtwängler und Loeschke, Pl. XLI, 427; the figure shown Pl. XXXVIII, 394, belongs to the same type, though it lacks the shield.

3. Pl. XLIX, 1. Bossert, p. 195, no. 267. Schuchhardt, p. 132, fig. 132. These warriors have generally been regarded as wearing the skins of animals, but according to the very attractive interpretation of V. Müller (*Jahrb.*, 1927, pp. 15, 16), what looks like a tail is really the long point or tassel often developed by the Asia Minor kilt or loin-cloth, and also worn by the Cup-bearers of Cnossos.

4. *Excavations in Cyprus*, Pl. II; Hall, *Aegean Archaeology*, p. 202.

5. Pl. XLIX, 2; W. Max Müller, *Asien und Europa*, p. 374.



and military coat, carries a round shield which is probably the earliest known example with arm-loop and hand-grip. The round shield itself dates further back in Asia Minor, for it appears as a sign on the Phaistos disc with bosses similar to those of the Shardana shield; but we cannot tell how it was carried. The Shardana and Pulesati at Medinet Habu seem as a rule to carry it by a single hand-grip, also used as an arm-loop, and sometimes sling it behind their backs<sup>1</sup> on a telamon, like the griffin-slayer of Enkomi.

The results of this review of the very scanty archaeological material available are as follows:—

Within the limits of the Late Helladic age, which extends from about 1600 to a date which cannot be precisely fixed but may be put at about 1104, the traditional date of the Return of the Herakleidai, we have two systems of armour. The first is the Shaft-grave type, the evidence for the actual use of which on the mainland comes almost entirely from the Shaft-graves, and is therefore confined to the sixteenth century. In view however of the continuity of culture, complete so far as our material allows us to trace it, in the sixteenth and fifteenth centuries, this type may be presumed to have lasted till at least 1400, the end of the Second Late Helladic period. The latter half of the Third Late Helladic period yields evidence, scanty but concordant, of a new equipment, of which the chief feature is a small shield combined with a corslet;<sup>2</sup> and contemporaneously we find a similar, though not identical, equipment worn by military folk moving actively about the east end of the Mediterranean. This suggests that fighting has become a more cosmopolitan affair demanding some standardisation of armature. The Shaft-grave equipment could only be used effectively against one of the same type, and indeed seems more adapted to an elaborate form of duelling than to warfare. Its disappearance from the mainland might be due to contact, friendly or hostile, with more warlike races abroad, or even to conquest by a race or dynasty from the area of the small shield culture. Two corresponding types of armour exist in the Homeric poems. Hector's shield extends from neck to ankle (*Z* 117): a shield on the edge of which the wearer trips, and which is described as *ποδηνεκής* can only be a body-shield (*O* 645-7). But the

1. Pl. XLIX, 4; W. Max Müller, *Asien und Europa*, pp. 365, 374, 375.

2. It should be noted that the corslet is not a necessary concomitant of the small shield. The somewhat Greek-looking, possibly Carian folk who arrive at Carchemish about 900, have small round shields but no corslets.



use of small shields is equally clear. The assailants of the Greek wall advance *βόας αἶψας ὑψόσ' ἀνασχύμενοι* (*M* 137/8). Agamemnon deals a man a mortal spear-thrust *ὑπ' ἀσπίδος ὀμφαλοέσσης* (*A* 259/60), and Odysseus in the same way struck a man who was dismounting from his chariot *δουρὶ κατὰ πρότμησιν ὑπ' ἀσπίδος ὀμφαλοέσσης* (*A* 424). The phrase is notable as replacing the normal *παρ' ἀσπίδος* or *παρ' ἀσπίδα* which could be equally well used of either form of shield. Finally, in the arming scenes, of which several occur in the *Iliad*, a transition from one type to the other can be traced.

Only one passage in the *Iliad* describes the assumption without alteration or addition of the Shaft-grave equipment. Teucer, abandoning archery for heavy-armed fighting, *σάκος θέτο τετραθέλυμνον*, etc. (*O* 479-82). This is presumably an ancient formula, and it is worth noting that it occurs in connection with archery, an art which has almost become obsolete in the *Iliad*, though evidently held at one time in high repute. Neither shield nor helmet has any epithet implying the use of metal; the single spear is characteristic of the Shaft-grave monuments, and if Hellenic audiences supposed Teucer to be already wearing the unmentioned greaves, it is to be noted that on these same monuments neither greaves nor leggings occur.<sup>1</sup> Their earliest appearance is on the frieze of the megaron at Mycenae.<sup>2</sup>

The arming of Odysseus in the Mnesterophonia (*χ* 122 ff.) is precisely similar (save that he takes two spears), and in that of Athene (*E* 138-44) the only difference is that the aegis is substituted for the shield. Ares when disarmed (*O* 125-6) relinquishes only helmet, spear, and shield. *B* 388 preserves another Mycenaean formula.

The order of the arming is important, and the reason for it is obvious. The shield is assumed before the helmet, and removed after it because to pass the baldric of a heavy body shield over a crested helmet would be difficult if not impossible. The difficulty would remain, though diminished, in the case of a smaller shield with a baldric, like that on the Enkomi mirror handle.

When we turn to the arming of Patroklos (*II* 131 ff.) we find all the pieces of the Ionian panoply, and in their natural order, save that the shield is still assumed before the helmet. But the verb—*βάλετο*—which it shares with *ξίφος* is appropriate only to a shield with telamon,

- 
1. A gold 'Gamaschenhalter' or metal top for a legging comes from Shaft-grave IV.
  2. Rodenwaldt, Beilage, I.

and as we have found this in conjunction with a corslet on the Enkomi mirror handle, there is no reason to suppose that this expansion of the Shaft-grave frame-work would not rightly describe an 'Achaean' arming. The two spears which can be carried by a warrior whose shield has a telamon, and is not over large, are found in conjunction with shields of various shapes on Dipylon vases; two are also carried by the huntsmen of the Boar-hunt fresco from Tiryns, but in conjunction with the body-shield one long heavy spear is carried. Only one spear is mentioned in the 'Mycenaean' arming scene (*O* 478-82): Ajax and Athene each carry only one, Paris when arming takes one; and Achilles naturally takes the heirloom which none but he could wield. Patroklos declines upon the usage of his own day; so does the up-to-date Agamemnon.

The arming of Paris (*Γ* 330 ff.) in our texts follows piece for piece the arming of Patroklos in *Π*. But an interesting variant was supported by Zenodotos,<sup>1</sup> according to which 334-5 are athetised, and after the line on the spear the following is inserted 'ἀμφὶ δ' ἄρ' ὤμοισιν βάλετ' ἀσπίδα τερσανόεσσαν.'<sup>2</sup> This gives us an arming scene in the 'Ionic' order, though the shield is of the telamon type. Zenodotus in preferring this variant is probably influenced by the fact that Paris is an archer, and that in *O* Teucer, the Greek archer, does not assume a sword when arming for fighting at close range. This is probably traditional, as the archer may well have carried a short sword or dagger to protect himself against all contingencies, but the order is an innovation, and was rejected by Aristarchus. It may also be noted that the word for the shield is ἀσπίς in the variant, σάκος in the text.

The Shaft-grave frame-work still holds in the greatly amplified arming scenes *T* 369-91 and *A* 16-46, though both show innovations. In *T* the shield is still, as in the passages already dealt with, called σάκος, but this verb is now εἴλετο, that used throughout for grasping the spear. This suggests that the shield is lifted by an arm-loop or hand-grip, as also appears to be the case in *T* 261-2; further, it is compared to the moon, which suggests that it is circular, while the helmet, smaller and of irregular outline, is compared to a star. The last and most elaborate arming scene, that of Agamemnon (*A* 16-46), contains many peculiarities. For the

1. Schol. A on *Γ* 334.

2. If the form is genuine, it was presumably formed however incorrectly, from *τερσαίνω*, itself ἀπ. λεγ. in the *Iliad*, = αἶος. But Robert's suggestion that it is a corruption of *τερμίδεις* is probably correct.

moment it is enough to note that for the first time the shield is called *ἀσπίς* and the verb is *ἀνείλετο*. The noun is now the word which survives in ordinary Greek prose, and the verb unmistakably means to pick up. Whatever archaic epithets cling to this singular shield, it was at least no body-shield. None the less in these last two cases the order of the old 'Shaft-grave' arming-scene is adhered to, and the shield is lifted before the helmet is in place. This is however quite in order, for both shields are expressly stated to have had a telamon.

Two main types of shield having been found on pre-Homeric monuments, the question naturally arises whether they are represented by the two Homeric words *σάκος* and *ἀσπίς*. Reichel, who regarded the purely metallic Ionic shield as the only possible alternative to the body-shield, claimed for the older type any possessing a telamon, or described by an adjective implying the use of leather in the fabric. The first criterion we have already seen to be fallacious, and the second is no less so. There is no reason why a small or round shield should not be either made of or backed with leather: some bronze shields found at Olympia are too thin for use without such a backing, and are pierced for its attachment,<sup>1</sup> and the fragments of a finely decorated Ionian shield of bronze found at Carchemish and dated by the destruction of the city to a time not later than 604<sup>2</sup> are far too thin for use without a similar strengthening.

The mention of leather therefore is no proof that the shield in question is a body-shield; and as the Homeric body-shield had or might have a metal facing, we can base no conclusions as to shape or size on the adjectives *βόειος* and *ταύρειος* which are applied to the *ἀσπίς*, or *φαεινός* or *αἰόλος* which are used of the *σάκος*.<sup>3</sup>

*σάκος* however does appear to be used mainly of the body-shield, which probably it originally denoted. Its standing epithets are *μέγα* and *στιβαρόν*; it is not applied to any individual shield distinctly implied to be small; and some of the formulae in which it occurs in the plural are more appropriate to the large than to the small shield (e.g. *Α* 593 (= *N* 488) × 4). It is definitely associated with two of the leading heroes. Aias has only a *σάκος*, which is repeatedly alluded to in terms hardly applicable to any but the body-shield. For example, *Π* 106 combined

1. Furtwängler, *Die Bronzen von Olympia*, p. 163.

2. Mr. Woolley suggests that it was carried by a Greek mercenary in the Egyptian service at the battle of Carchemish in that year.

3. The fragmentary bronze found in abundance in the Shaft-graves may well have come in part from the facings of shields.

with  $\Xi$  404 shows that it was carried by a telamon passing over the left shoulder, like those on the Lion Hunt dagger-blade, and crossing that of the sword, which hung from the right, and that the weight on the shoulder was the chief source of fatigue. But the telamon of a shield carried on the left arm would necessarily pass over the right shoulder; it is true that it would not normally take the weight in battle, and the fatigue would therefore be felt mainly on the left side, but in the arm rather than in the shoulder.

The  $\sigma\acute{\alpha}\kappa\epsilon\alpha$  of  $\xi$  474-9 are body-shields; the  $\acute{\alpha}\sigma\pi\acute{\iota}\delta\epsilon\varsigma$  of  $K$  152 are used in a different way at night, and appear to be small.

Similarly the shield made for Achilles by Hephaistos is regularly called  $\sigma\acute{\alpha}\kappa\omicron\varsigma$ ; only Thetis, when ordering it, uses the term  $\acute{\alpha}\sigma\pi\acute{\iota}\varsigma$ . It has however no such distinctive character as that of Aias; as we have seen, the author of the arming scene in  $T$  probably thought that it was circular, and in  $T$  261 the son of Peleus  $\sigma\acute{\alpha}\kappa\omicron\varsigma \mu\grave{\epsilon}\nu \acute{\alpha}\pi\omicron \epsilon\omicron \chi\epsilon\iota\rho\acute{\iota} \pi\alpha\chi\epsilon\acute{\iota} \epsilon\sigma\chi\epsilon\tau\omicron$ , a manœuvre only possible with the small shield.<sup>1</sup> The adjective  $\sigma\alpha\kappa\acute{\epsilon}\sigma\pi\alpha\lambda\omicron\varsigma$ , once applied to Tydeus ( $E$  126) shows a similar confusion, and in  $O$  529 a thorex,  $\gamma\upsilon\acute{\alpha}\lambda\omicron\iota\sigma\iota\nu \acute{\alpha}\rho\eta\rho\acute{\omega}\varsigma$ , is combined with a  $\sigma\acute{\alpha}\kappa\omicron\varsigma$ ; but corslet and body-shield are never found in conjunction on the monuments. As might be expected, the originally well-defined connotation of the word has become blurred for a poet living later by some centuries than the probable date of the disappearance of this archaic piece of armour.

On the other hand the epithets, descriptions, and uses of  $\acute{\alpha}\sigma\pi\acute{\iota}\varsigma$  are mutually inconsistent and appropriate, some to a large, others to a small shield. The size of Hector's  $\acute{\alpha}\sigma\pi\acute{\iota}\varsigma$  has already been referred to, and the passage in  $Z$  is confirmed by  $X$  97.  $\acute{\alpha}\mu\phi\iota\beta\rho\acute{o}\tau\eta$ , 'coming round both sides of a man,' is suitable to the deep curvature of both forms of body-shield, and not to the nearly flat plane of the round shield;  $\pi\omicron\delta\eta\nu\epsilon\kappa\acute{\eta}\varsigma$ , the most decisive epithet of all, makes its one appearance in conjunction with  $\acute{\alpha}\sigma\pi\acute{\iota}\varsigma$ .  $A$  259/60 and 424, already cited as evidence for the existence of the small shield in Homer, use the word  $\acute{\alpha}\sigma\pi\acute{\iota}\varsigma$ , to which passages we may add  $N$  161-3 and perhaps  $K$  152; the use of the body-shield on a bivouac is to be found in  $\xi$  479. So far we have no evidence of shape, and a small shield is not necessarily circular; witness the Warrior Vase and Stele. In  $M$  294-8 however a round shield is plainly indicated, and

---

1. Cf. also  $\Xi$  370-7.



also one in which metal was the most important element, for though it included several layers of hide, it was made by the *χαλκεύς*, and not like that of Aias by the *σκυτοτόμος*. In line 401 it is stated to have a *telamon*, as indeed is implied by line 298, but *περὶ κύκλον* leaves no doubt about the shape.<sup>1</sup> *T* 274-81 is an equally decisive passage; the shape is guaranteed by 280, the relatively small size by 278. Hence *N* 405-7 is probably to be understood of the round shield also, without invoking the support of the obscure word *δινωτήν*; in that case the equally mysterious *κανόνες* would rather be the arm-loop and hand-grip of the small shield than the cross-staves of the figure-of-eight. In fact *ἀσπίς*, the word which survives in classical Greek and belongs to the language of everyday life, is used indifferently in Homer for both types. Like so many names of material objects in Greek, the word *ἀσπίς* cannot be referred to any known Indo-European root; for *σάκος* there are at least plausible derivations. It might perhaps be maintained that *σάκος* and *ἀσπίς* were originally used to distinguish the two forms of body-shield, and it has often been pointed out that the comparison of the shield of Aias to a tower really suits the straight-sided type better than the figure-of-eight. If this distinction ever existed, it was early lost: the poems tell us nothing of the shape of the body-shield. It is an equally plausible theory that *σάκος* was the word used by the Greek-speaking immigrants into the peninsula, and that it was gradually supplanted by the word of a different language with which they came in contact; even as *μέθυ* is supplanted in prose by the alien *οἶνος*. *ξίφος* and *θώρηξ* are similarly words of unknown origin, and *θάλασσα*, which has all the appearance of belonging to the Aegean language, has wholly superseded the Indo-European root which appears in Latin as *mare*, and is common to all the European members of the Indo-European family of languages.

One adjective peculiar to *ἀσπίς* remains for discussion, viz. *ὀμφαλοίεις*. It is ambiguous, for it might mean 'with prominent *ὀμφαλός*' (cf. *κωπήεις*) more naturally however 'with many *ὀμφαλοί*' according to the ordinary meaning of the suffix when attached to a noun capable of being used in the plural. Shields of both sorts find mention in Homer. Agamemnon's shield had twenty tin *ὀμφαλοί* besides one in the centre of *κύανος*. In *N* 192, however, a shield is hit on the *ὀμφαλός*, and that of Aias is struck *ἐπομφάλιον* (*H* 267). *Ὀμφαλός* might perhaps be used of the sort

---

1. *ῥάρδος* may confidently be taken as stitching with gold wire; see Leaf, *ad loc.*

of peak into which the figure-of-eight shield runs up in the centre; a central boss is not found on either form of body-shield, and is not characteristic of either archaic or classical Greek shields, though occurring on one type in a highly elaborated form. Numerous ὀμφαλοί are indicated on the figure-of-eight shield on the gold intaglio from Mycenae (No. 3 on page 92); and also on the Boeotian specimen (No. 5) probably representing the rivets which must have superseded stitching when a complete metal facing was introduced. Numerous small bosses probably fulfilling the same function also occur on the round shield of the thirteenth century Shardana mercenary.<sup>1</sup> The presence of bosses therefore tells nothing about the shape of the shield: as they are known in connection with both forms before the Dorian invasion there is no need to seek a later origin for the epithet.

Agamemnon's shield is peculiar, and cannot be illustrated from Minoan or Mycenaean material. The mention of the Gorgoneion used to be taken to relegate it to the archaic Hellenic period, but it appears that reference to a 'cult of the head with the protruding tongue' has been found at Boghaz Keui. It presents some analogies with certain Cretan shields of somewhat uncertain date, but regarded by Poulsen as not later than the eighth century. It has a central boss of κύανος, combined with a Gorgoneion, which is in so far central that it is flanked or encircled by other figures; presumably it was above or below the κύανος. These shields, all found in the Idaean cave, are decorated in a mixed Oriental style resembling that of the well-known 'Phoenician' bowls found mainly in Central Italy and in Cyprus. Their most characteristic feature is a central head or figure of an animal or monster in high relief, an arrangement which might well be expressed by ἐστεφάνωνται, which in combination with ἐπί (with which again περί is contrasted) must mean 'set like a crown upon . . .' Δεῖμος and Φόβος would then perhaps be comparable to the mythological figures which flank Zeus on the Zeus shield from the Idaean cave,<sup>2</sup> though this would be more strictly expressed by ἀμφί. Professor Myres, comparing the description of the aegis (E 739), suggests that Δεῖμος and Φόβος are possibly collectives designating a series of small apotropaic masks, and filling one of the outer zones as do the rosette-like ornaments of the Snake Shield of the Idaean cave.<sup>3</sup> Φόβοι are among the denizens of the underworld. The twenty tin

1. Pl. XLIX, fig. 2.

2. Pl. L, 1; Poulsen, *Orient*, p. 79.

3. Pl. L, 2.



ὄμφαλοί could be accommodated in an inner or outer zone, as are the much more numerous ones of the Snake Shield. This interesting piece offers in its pair of snakes another point of contact with Agamemnon's telamon if not with the shield itself; and the Homeric description of the shield is well adapted to such a crowded and ill-arranged composition. *Θούρις* again suggests a vigorously used parry-shield, as does the already cited epithet *σακέσπαλος*; the compensating quality of the body-shield is expressed by the epithet applied to the wearer, *ταλανύριος*. The shield found at Carchemish<sup>1</sup> with its central Gorgoneion may have been influenced by the Cretan type; it is however obviously derived from the round shields with concentric circles found in Italy and elsewhere (Helbig, p. 312, fig. 118). The type of the Cretan shield, though apparently transitory, has left traces in the vase-painting of the sixth and even the fifth century.<sup>2</sup> The central ornament is generally a satyr's head, and is plainly *repoussé*.

The shield of Aristomenes which Pausanias<sup>3</sup> saw dedicated in the sanctuary of Trophonios at Lebadeia was of this type, having as *ἐπίθημα* an eagle whose outspread wings extended to the rim. Such ancient votive offerings may well have furnished archaeological hints to artists, and even to poets for their renderings of the heroic age.<sup>4</sup> Euripides describes a shield of this type in the *Meleager* (Nauck, *T.G.F.*<sup>2</sup>, 530).

Unlike the shield of Agamemnon, that of Achilles bears marks of derivation from very ancient sources. As in the case of the arming scenes, there is a framework which lends itself to expansion, and not all the scenes are necessarily of equal antiquity. The rendering of colour, however, by the inlaying of different metals takes us straight back to the inlaid daggers of the Shaft-graves, and to the sixteenth century. The art until recently appeared to be limited to this period when it flourished both in the Aegean area and in Egypt, which would seem in this case to be the borrower.<sup>5</sup> The recent finds at Dendra however

1. *Carchemish*, II, Pl. XXIV.

2. Graef, *Die Antiken Vasen von der Akropolis zu Athen*, Taf. 35, q. Furtwängler and Reichhold, *Gr. V.*, 14 (Euthymides amphora in Munich).

3. Paus. IV, 16, 7.

4. See Aesch. *S.C. Th.*, 492, *ὥπασεν πρὸς ἀσπίδι*, 643, *προσμεμηχανημένον*. It is true that whereas the Cretan designs are *repoussé* the language of both Aesch. and Paus. suggests an ornament riveted or soldered on.

5. The relevant material consists of the series of dagger-blades and of a silver cup with floral motives in gold from the shaft-graves; of a dagger and fragments from Vaphio (*Aegean Essays*, pp. 63 ff., and Tsountas and Manatt, p. 200); of a dagger recently found by Mr. Blegen and the cup from Dendra mentioned in the text; of a dagger-blade

include an inlaid cup of somewhat rough workmanship and several finely cut gems in L.H. III surroundings; at present it is impossible to say whether these are 'heirlooms,' or whether the Minoan arts still survived, perhaps as the hereditary occupation of a few families.

The preference for scenes of peace and festivity connects the shield with Cretan rather than with mainland art, in which military subjects are prominent; while the beleaguered city has a prototype not merely on the silver rhyton of the Shaft-graves, but on the faience plaques of the Town Mosaic from Cnossos, which probably goes back to M.M. II. The scene of the dance is definitely compared with a famous Cretan original; and for representations of sun and moon we must turn to Minoan rather than to any subsequent art. The echoes of the past reach the *Iliad* from afar in space as well as in time.

The examples given have carried back the use of the round shield in the eastern half of the Mediterranean to the thirteenth century in the person of the Shardana mercenary: but it was probably in use in Asia Minor at a much earlier date. It has been noted above that a round shield with bosses is one of the commoner signs on the Phaistos disc, which belongs to M.M. III, occurring repeatedly in association with a head wearing the feather crown later associated with the Pulesati, who also carry round shields. These feather-crowned people may, with fair confidence, be assigned to Lycia, which makes more probable the identification of the Shardana with the people of Sardis. Yet other examples of the round shield occur at Carchemish after the city has fallen, about 1195 B.C., into the hands of an iron-using and cremating population.<sup>1</sup> These invaders, who presumably come from Asia Minor, carry a round shield on a telamon and wear a helmet which is a sort of anticipation of the Corinthian helmet:

---

from Thera inlaid with axe-heads (Tsountas and Manatt, fig. 118) and of a cup inlaid with male heads from Mycenae, but not from the Shaft-graves (Bossert, 204). Neither of these latter examples can be dated: the cup, which is of much rougher workmanship than the daggers, may well be later. The heads are bearded, but have shaven upper lips, in this differing from the gold masks of the Shaft-graves, which are either clean-shaven or have moustache as well as beard. The shaving of the upper lip, which is found on the Warrior Vase and also in archaic Greek art (*e.g.* on the Aristonothos Vase), is noted by Poulsen as of Eastern origin and can be seen on some of the oldest finds from Ur. Whence the Spartans derived their injunction to shave the moustache does not appear. The Egyptian material consists of two articles from the grave of Aahotep, mother of Aahmes who reigned 1587-1562, viz. an axe-blade with an inlaid griffin, and a dagger, whose rib is decorated with an inlaid subject. (*Palace of Minos*, I, pp. 551, 715, figs. 402, 537.) Crete may be confidently regarded as the headquarters of the art.

1. *Carchemish*, I, pl. B 2. It does not appear, however, that the representations of this people can be dated above 900 B.C.

there are no cheek-pieces, but the crest rests immediately on the helmet itself. Owing to the somewhat Greek character of the equipment, Mr. Woolley has suggested that these immigrants are Carians: if so, they have not yet produced two of the inventions with which they are credited, for they have, as accords with their exposed faces, no shield-blazons, and the shields are still carried on telamons. They have also no corslets. The griffin-slayer of the Enkomi mirror-handle doubtless derived from Asia Minor his round shield, the range of which we have seen to lie from Lycia to Carchemish; while at an unknown, but probably later date, we have round shields with concentric circles from the region of Lake Van.

The mainland of Greece, so far as our evidence goes, lies outside this region. The round shields of the Tiryns fragments are very small, and have only hand-grips, whereas the Shardana, Pulesati, and Carchemish round shields sometimes have arm-loops and often have telamons as well. The Warrior Vase type of shield has no contemporary parallel, so far as is at present known, in any other region.

That the tradition of the body-shield should survive in epic, sometimes vivid and unmistakable, sometimes merely in conventional phraseology, is a remarkable fact; for, as has been shown, in at least the latter part of L.H. III it apparently was superseded in the Argolid as a practical piece of armour. It has often been suggested that it survived in the hour-glass Dipylon shield and the later 'Boeotian'; but Lippold<sup>1</sup> seems to be right in comparing these forms with the Hittite shield with incurving sides, though he does not go on to draw the conclusion accepted by Sir Arthur Evans that they are derived from it or from a common source. The 'hour-glass' form arises from the shrinkage of a rectangular piece of leather which has horizontal wooden rods at top and bottom, and a perpendicular one down the middle, but nothing to stiffen the lateral edges. The 'Boeotian' shield is the extreme instance of the shape translated into metal, or at least provided with a metal rim.

If it is not the lineal descendant of the body-shield, neither is it the original of the epic descriptions. It is unlikely that a highly local form, scarcely traceable outside Attica and Boeotia, should be adopted in Ionian epic, nor is the size adequate; for the 'hour-glass' shield does not reach the knee, and Lippold can produce only one example of a form more approaching the Hittite, which can fairly be called a body-shield, though

1. *Münchener Archäologische Studien, Griechische Schilde*, p. 416; p. 451, Abb. 21 and 22.

even this hardly comes below the knee. The Boeotian shield is known from Boeotian terra-cottas, representing chariots in which a warrior and charioteer stand side by side, the charioteer having the Boeotian shield slung over his back, while the *παραιβάτης* carries the round shield on his left arm, from Ionian and Athenian b.f. vase-painting, where it is most commonly associated with heroic figures, and notably with Achilles and Aias (*e.g.* on the Exekias amphora in Rome); and from the coin-types of Boeotia and Salamis, in the latter case, of course, with reference to the shield of Aias. In Corinthian vase-painting the Boeotian shield is rare: in proto-Corinthian it occurs only once: at Sparta it is found once on an archaic moulded pithos representing a heroic scene of combat. But the long series of lead figurines from the same site, which begins shortly before 700 and continues throughout the seventh century, knows only the round shield.

The 'heroic' use of the Boeotian shield in vase-painting is probably wholly fanciful. The telamon has disappeared, and the shield is carried by an arm-loop and hand-grip with the arm in a perpendicular position when at rest, which seems quite unpractical. Literary evidence for the use of a body-shield in Greece in historic times is all but lacking. It is mentioned by Pausanias<sup>1</sup> that Philopoemen induced the Arcadians to change their equipment of large oblong shields resembling the Celtic *θυρεοί* and Persian *γέρρα* for *'Αργολικαὶ ἀσπίδες*; possibly in the Arcadian highlands the prehistoric body-shield had lingered on.

In post-Minoan Crete the round shield only is known. But it seems not impossible that the dispersal of population caused by the Dorian, and perhaps the Achaean invasion, carried the body-shield to the Asia Minor coast. On an Assyrian relief<sup>2</sup> of the time of Sennacherib (705-682), Ionians or Carians are depicted carrying 'tower' shields slung over their backs and wearing, some of them Greek helmets with crests of a type sometimes seen on Dipylon ware, one a feather crown of Lykian type, some a combination of the two. A later series of reliefs in the British Museum, which represent a lion hunt of Assurbanipal, and are dated to 669, show the king's guards, though themselves Assyrian in type, equipped with immense shields, some of the 'tower' type, straight-sided and semi-cylindrical, others oval or round and protuberant,<sup>3</sup> curiously reminiscent of the 'tower' and 'figure-of-eight' shields on the Lion-Hunt Dagger-

1. Pausanias, VIII, 50, 1.

2. *J. H. S.*, XXXI, p. 123.

3. Pl. XLIX, 6.



blade. True, the tower-shield has not the characteristic arched top of the Mycenaean, nor the oval shield the indented sides of the figure-of-eight: but both are ἀμφιβρότοι and of a size to satisfy all Homeric requirements; with the lower edge resting on the ground they cover the wearer to the chin. That the tower shield at least comes from the same quarter as the Ionian or Carian deputation of the Kuyunjik relief is shown by its association with the same Greek type of helmet. The oval shield is combined with a skull cap, and with elaborate boots and the Assyrian fringed sash; it is not itself Assyrian, nor have we evidence to connect it with Ionia. Possibly it comes from the region of Lake Van. If the tower-shield was indeed the Ionian equipment of 669, it was nearing the end of its history, for Psammetichus, who secured the throne in 663 B.C., summoned the bronze men of the new hoplite type to his aid,<sup>1</sup> and the seventh century Rhodian plate which shows Hector and Menelaos contending over the body of Euphorbos,<sup>2</sup> has the new equipment complete in every detail—plate corslet, round shield with arm-loop and hand-grip, helmet with cheek-pieces and metal greaves.

The survival of the body-shield in Ionia would account for its survival in Homeric poetry, though hardly, in view of other unmistakable legacies from the Mycenaean age, for its original appearance there. It may also help to explain the description of body-shield tactics in Tyrtaeus.<sup>3</sup> If he was not a Milesian—and there is no evidence, beyond the statement of Suidas, that he was—the story that he was may have arisen, as Wilamowitz suggests, from the Ionian character of his poetry, one trait of which may have been a borrowed description of the local armature. Excavation has disposed of the view that the equipment might have been used by Spartans in the seventh century.

Finally, the survival of the body-shield on the coast of Asia Minor would account for Herodotus' exact description of it. It is to be noted that the Carian inventions do not include the metal thorex.

## THE THOREX

The question of the thorex in the *Iliad* was the crux of Reichel's theory, and the manner in which he dealt with it was not satisfactory. If the Homeric shield is invariably the body-shield, then the corslet must

1. Herod., II, 152.

3. Tyrtaeus, VIII, 20-24.

2. Baumeister, Denkmäler, I, p. 730.

go ; for, as far as the monuments serve us, it never occurs in conjunction with the great shield. Reichel acutely pointed out that not only is the absence of a corslet sometimes plainly implied, but that its presence in several passages makes nonsense of them, and that in some its mere excision restores sense without disturbing the context. His main contention that the Ionian plate corslet, the earliest form of metal cuirass known in the Aegean, is an anachronism in Homer, and therefore due to interpolation in the strict sense, is unquestionably sound, and may be accepted the more readily because there is no evidence for dating the Ionian hoplite armour much above the middle of the seventh century, though Reichel himself was disposed to carry it up into the eighth.

When he came to deal with the words *θωρήσσεσθαι* and *θώρηξ* Reichel was less happy. As he recognised that it was impossible to banish them from the Homeric text as interpolations, his only resource was to give them a new sense. Pointing out that the verb *θωρήσσεσθαι* commonly means 'to arm oneself' without special reference to the corslet, he suggested that this was its original signification, that *thorex* also originally meant defensive armour in general, a meaning which on his view it sometimes retains in Homer, and that in each case the specialised meaning was only acquired later. This is obviously contrary to all analogy. *Κορύσσεσθαι* and *ζώννυσθαι* are both found, the former very frequently, with the same general meaning, but *κόρυς* and *ζωστήρ* never meant defensive armour in general. Rather the general use of the verbs marks a period when *κόρυς* or *ζωστήρ* held the place of supreme importance afterwards taken by the *thorex*. The fact that *θώρηξ* is a word of unknown origin points in the same direction : the Greeks took the article and its name from some foreign source. The word has no meaning but corslet until the medical writers, creating a new vocabulary, gave it the anatomical meaning which it has ever since retained.

The solution of the Homeric difficulty is to be found in the fact that corslets existed in the Aegæan and Eastern Mediterranean in L.H. III, if not earlier, and it is to be regretted that Reichel, who in his second edition recognises this fact, did not make better use of it. Doubtless he was influenced by the fact that they do not occur in conjunction with the body-shield : but if he meant to be guided entirely by this consideration, he should logically have deprived the Homeric hero of his chiton as well as of his corslet.

The earliest monuments which bear on the question are the two gold



breastplates, one plain, one decorated with a design of spirals,<sup>1</sup> which were found in the Fifth Shaft-grave. They are mere plates, stopping short of the waist, but in a stronger material and attached to a chiton, they would protect just that part of the body in which the wearer of the great shield was liable to be stabbed over the top of it, as happens, for example, on the gold intaglio from the Third Shaft-grave.<sup>2</sup> The modelling of the nipples leaves no doubt as to the part of the body for which the plates were destined: it is, however, not impossible that they are merely a sort of extension of the gold masks, and do not represent anything in use in real life. In one of the graves the remains of a child were found with gold leaf which had been wrapped round the body and retained the modelling of the hands and feet.

Genuine corslets<sup>3</sup> are worn by some of the feather-crowned Pulesati, and regularly by the Shardana, on the reliefs of Medinet Habu which commemorate the defeat inflicted by Ramses III on the mixed host which, *circa* 1195, advanced to invade Egypt by way of the Syrian coast both by sea and land. These corslets are short, stopping at the waist, where they are secured by a belt. They are worn over a close-fitting chiton, whose short sleeves are sometimes indicated; the lower part of the dress may be, not the skirt of the chiton, but a kilt-like loin-cloth worn by various Anatolian folk. The one vertical and two or three horizontal strips on this garment W. Max Müller regards as a protection of metal, which seems unlikely, or of leather; they might also be quilted bands. The corslet is formed of parallel bands or strips probably covered with metal; above it is scooped out round the arms to give freedom of movement, but rises to the neck, the upper part being left plain. The strips are sometimes horizontal, sometimes rise into a point on the chest, in which case they doubtless are modelled on the ribs. The Pulesati in all probability come ultimately from Lycia, having perhaps sojourned in Crete *en route*, and an example of a similar corslet from a L.M. III site occurs on the mirror-handle from Enkomi. The armour of the griffin-slaying figure is of a mixed type: the corslet is of the pointed Shardana variety, the sword, a narrow rapier with a prominent mid-rib, resembles those of the Shaft-graves, and is used to deliver a stabbing stroke, whereas the Shardana swords of Medinet Habu are broader, for the most part shorter, and are

1. Schuchhardt, p. 255, fig. 256.

2. Pl. XLVIII, 2.

3. Pl. XLIX, 3 and 5. Owing to the fading of the paint, they are not always demonstrable.

used for slashing ; the shield is round, and slung over the back by a telamon. Crete itself affords no instance of the use of the corslet in Minoan times, unless the curious article worn by the principal figure on the Harvester Vase, and also depicted on a sealing,<sup>1</sup> is to be so regarded. More probably it is a ritual garment. As far as our evidence goes, the Pulesati type of corslet was unknown on the mainland of Greece ; but the figures on both sides of the Warrior Vase wear a corslet which appears to be laced up the sides, the upper part of the trunk being shown full front, as in archaic Greek art, though the legs and heads are in profile. The corslets reach to the waist or just below it, and stand out stiffly from the figure. The material can hardly be determined, but is more probably leather than metal. If this is so, the white lines and dots on the chests of the figures on the back of the vase probably represent strips and discs of metal attached to the leather. This corslet also appears on the Warrior Stele, and something similar is worn by the man on the already quoted contemporary vase fragment from Mycenae.<sup>2</sup> A vase fragment from Mycenae (*Eph. Arch.*, 1891, Pl. III, 2) shows a warrior wearing what appears to be a leather jerkin just covering the top of the thigh, with no chiton visible. It is possible that this represents a shirt-like scale corslet current in Syria in the fifteenth century.<sup>3</sup> These latter monuments, viz. the reliefs of Medinet Habu, the Enkomi mirror-handle, the Warrior Vase and Stele, and the just quoted fragments, are approximately contemporary ; and the armour, though presenting two distinct varieties, implies the same type of fighting. Though the corslet does not occur apart from the small shield, the converse is not true, for the iron-using, cremating conquerors of Carchemish have the round shield, apparently slung on a telamon, but no corslets over their chitons.

Owing to the silhouette style of the Geometric Vases, nothing can be learned from them of the use of the corslet : we next meet it as the fully developed Ionian plate corslet on such seventh-century vases as the Euphorbos plate quoted above. This article is drawn with a wealth of detail on countless vases of the seventh and sixth century, and is of a uniform type. It is plainly of metal throughout, and must have consisted of a front and back plate lacing up one or both sides, though owing to the convention of showing the chest full front, the method of fastening is not visible. It covers the trunk to the hips, fitting closely above the waist,

1. *Palace of Minos*, I, p. 680, fig. 500 i.

2. Rodenwaldt, p. 24.

3. Wolf, *Bewaffnung des Altägyptischen Heeres*, pp. 96-98.

but expanding below it, and ending in a sharply off-set trim, which would give free play to the hips, and would make any slashing blow glance off. Anatomical details, the nipples, and the ends of the floating ribs in the conventionalised form of an arch or omega, are generally rendered on carefully drawn examples.

It is plain from the monuments that corslets are chronologically entitled to figure at the Siege of Troy; there is therefore nothing surprising in the frequent occurrence of *θωρήσσειν*, *θωρήσσεσθαι* and *θώρηξ*, and the existence of derived words such as *αἰολοθώρηξ* and *θωρηκτής*. *Χαλκοχίτωνες*, which occurs twenty-nine times<sup>1</sup> in the *Iliad* and twice in the *Odyssey*, testifies to the normal use of body armour, and would well suit a linen or leather chiton with some metal about it, e.g. the leather shirt covered with metal scales mentioned above which the Egyptians borrowed from the Semites, and which is worn by the king on the ivory draught-box from Enkomi.<sup>2</sup>

It is however well to bear in mind Robert's warning that until the epic was committed to writing, any epithet in Homer which was becoming archaic could be easily replaced by a more modern one, so long as it was metrically equivalent. Collectors of poetry transmitted orally testify not only that no two reciters agree word for word in the rendering of the same poem, but that the same reciter never delivers the same poem, if it be of any length, twice in precisely the same language. *Χαλκοχίτωνες* may well have replaced the obsolescent *ἀσπιδιῶται* in many passages, but the change should have begun in heroic poetry at least as early as the Siege of Troy. It is difficult to determine the number of Homeric passages which imply<sup>3</sup> the absence of the thorax, for the argument *ex silentio* is quite unreliable. A leather corslet would be too easily pierced for the poet always to think it necessary to mention it.

The arming of Teucer, however, and the disarming of Ares already quoted preserve the ancient formula; so, too, did the 'repertory' duels of *Γ* and *Η* till the general adoption of the Ionian panoply brought about the interpolation of the self-betraying line *καὶ διὰ θώρηκος πολυδαιδάλου*

1. One instance (N 255) occurs in a line omitted by Aristarchus.

2. *Excavations in Cyprus*, Pl. I.

3. In the following passages a warrior is wounded in the breast without any mention of a corslet:—Δ 480 ff. also 528; Θ 302 f.; Λ 321 f., 578 f.; N 186; O 523 f., 576 f.; Π 481 f., 597 f.; P 348 f. This list does not pretend to be exhaustive.

ῥήρειστο,<sup>1</sup> which also contributes one element of confusion to the wording of Menelaos in Δ.

The introduction of the corslet into the arming scene is not necessarily an interpolation, for it might well have stood there in twelfth-century poetry if not earlier, nor does it wreck the sense as the stock line does in Γ and Η: but the formula for the duel bears the appearance of being older still, contemporary with the earliest arming formula, that of Ο 479-83.

A comparison of Ε 98-9 with 113, 282, and 796-8 suggests that the corslet of Diomedes is intrusive, and that possibly it first made its appearance in the guise of some peculiar form of chiton, plaited or quilted,<sup>2</sup> and capable of being pierced by an arrow; it is unfortunate that the meaning of στρεπτός is unknown. The last passage seems to indicate clearly the Shaft-grave equipment: Diomedes is oppressed by the broad telamon of his shield, but merely by the weight: it is not said to gall his wound, which is on the right shoulder, and moreover the telamon of the small shield, though passing over the right shoulder, would not be a source of fatigue in battle when the shield was carried on the left arm. Diomedes therefore like Aias in Π 106 has the body-shield whose telamon passes over the left shoulder, and he must lift it to get his left arm sufficiently free to attend to the wounded right.

On the other hand, though no corslet is mentioned at the slaying of Asteropeios, it looks as though the poet allowed for one when he makes Achilles deal the death-blow γαστέρα παρ' ὀμφαλόν, practically the spot described in Ν 568/7 as ἔνθα μάλιστα γίγνεται Ἄρης ἀλεγεινὸς ὀϊζυροῖσι βροτοῖσι. At any rate the author of Ψ 560-2 so read the passage (which is virtually duplicated in Δ 525/6), when he made the corslet of Asteropeios a prize at the funeral games.

As is well known, the corslet does not occur in the *Odyssey*,<sup>3</sup> though there are several passages where we might expect to find it, and its epithets and the descriptions of it in the *Iliad* are few and not very enlightening. This does not, as Reichel thought, in itself afford any presumption that it is throughout late and intrusive. The account of the shield is hardly less obscure, but the clear testimony of the monuments has enabled us to

1. Whether Γ 358 and Η 249 were borrowed from Δ 436 where it gives a good sense, or whether the line was a stock one in later epic, it is impossible to say. Δ 457 can hardly be used to prove 436 an interpolation.

2. The accepted use of γυάλον is against this, but the use of γυάλον itself in 99 is odd, and suggests the shoulder-piece of the fifth-century corslet. Κατὰ δέξιον ὤμον should be followed by a more precise localisation.

3. The verb θωρήσασθαι, however, does.



distinguish with reasonable certainty two types in the poems. The material for the corslet is scantier, and it must be admitted that the evidence of the text so far as it applies to specific corslets seems in all instances but one to point to the Ionian corslet.

It has been noted that the corslets of the Warrior Vase and Stele are short, stopping at the waist or just below it, as do also the close-fitting corslets of the Pulesati. The Ionian corslet was evidently designed to protect as much of the trunk as it was possible to do without hampering free movement; it comes much lower than the waist but leaves the lower part of the abdomen exposed. Homeric corslets are several times described as covering *γαστέρα μέσσην*,<sup>1</sup> an expression of some precision (since the *ζώστηρ* and *μίτρη* are said to protect the *νειαίρην γαστέρα* and *νειάτον κενεῶνα*), and one which exactly describes the Ionian corslet.

The corslets of N 371 and 397 are said to be of bronze, and from the *γύαλον* of another (N 587) an arrow glances off like a pea or bean from a winnowing shovel, which certainly suggests that the corslet was of metal.

The Ionian plate corslet was superseded in the fifth century<sup>2</sup> by a scale corslet fastening down the front; it is therefore natural that the word *γύαλον*, if connected with it, should have dropped out of the living language. There is no reason to doubt the account given of it by Pausanias (X, 26, 5, cf. P. 312 ff.), who unmistakably explains *γύαλα* as the front and back plates of an Ionian corslet; and the same meaning is given by the scholia on the Homeric passages, which agree in describing them as forming the whole *κύτος*, and not any particular part. The expression *γυάλοισιν ἀρηρότα* applied to a corslet (O 530) might suggest that the *γύαλον* means something attached to the corslet; but there is no reason why it should not mean 'composed of *γύαλα*,' on the analogy of II 212 (*ὥς δ' ὅτε τοίχον ἀνὴρ ἀράρη πυκινοῖσι λίθοισι*).<sup>3</sup> Etymology and the other uses of the noun, rare as they are, all support the meaning of (a) a cavity, (b) the surface enclosing a cavity.

All these corslets therefore must be claimed for the Ionian type; also those described as *κραταιγύαλοι* (T 361). *Θώρηκες νεόσμηκτοι* (N 342) and *λαμπρόν γανόωντες* (N 265) are presumably entirely of

1. N 506/7 and P 313. N 371 and 398 give a slightly different form.

2. It very rarely appears in r.f. vase-painting.

3. O 530 seems to be the passage on which Aristarchus founded his account of the corslet, which doubtless lies behind both the Pausanias passage and the *débris* in the scholia.

metal; so, too, is that of Asteropaios ( $\Psi$  560-2) and the rather *ad hoc* corslet of Diomedes ( $O$  195), and there are several passages like  $M$  151 which suggest a metal corslet. This leaves the corslets of the interpolated lines  $\Gamma$  358,  $\Delta$  136, and  $H$  252, those of the arming scenes, that of Paris ( $Z$  322) in an inorganic line whose removal would rather improve the syntax, and the  $\theta\acute{\omega}\rho\eta\kappa\epsilon\varsigma$  with no epithet of  $B$  544.

The one corslet whose description points to the older variety is that of Agamemnon. It was a gift from Cyprus; and long ago Sir Arthur Evans suggested that the  $\omicron\iota\mu\omicron\iota$  of which it was composed might be the strips or bands of the Enkomi and Pulesati type.<sup>1</sup> This view derives confirmation from a subsequent passage,  $\Delta$  234, where Iphidamas attacks Agamemnon, and strikes him  $\kappa\alpha\tau\grave{\alpha}$   $\zeta\acute{\omega}\nu\eta\eta$   $\theta\acute{\omega}\rho\eta\kappa\omicron\varsigma$   $\acute{\epsilon}\nu\epsilon\rho\theta\epsilon$ ; the blow encountered the  $\zeta\omega\sigma\tau\acute{\eta}\rho$ . The line exercised the scholiasts, who took  $\zeta\acute{\omega}\nu\eta$  to be a part of the corslet (possibly the off-set rim of the Ionian corslet?), and  $\theta\acute{\omega}\rho\eta\kappa\omicron\varsigma$   $\acute{\epsilon}\nu\epsilon\rho\theta\epsilon$  to mean 'forming the lowest part of the corslet,' a sense which the words will not bear.  $\zeta\acute{\omega}\nu\eta$  presumably means waist, as in  $B$  459; it is nowhere used in Homer for a man's girdle. The Enkomi griffin-slayer and some of the Pulesati have a belt which, in the former case, appears to support the loin-cloth. It would naturally cover the lower edge of the corslet, but might extend lower down. Some such arrangement would explain the blow sustained by Agamemnon, and possibly lurks in the confused narrative of the wounding of Menelaos.

The case of the corslet in the poems is not therefore parallel to that of the shield. Not only has the archaic body-shield survived in a poem whose author in all probability knew of it only as a tradition, but there is nothing in the description of any shield (with the exception of Agamemnon's) which cannot be paralleled from Aegean, or at least Mediterranean monuments, within the limits of the Helladic and Minoan age. If any of these passages were inserted or tampered with after the composition of the poem, we are not in a position to prove it.

The existence of the thorex in the Helladic age is proved by the monuments, and its recognition in epic from an early date by the use of  $\theta\omega\rho\acute{\eta}\sigma\sigma\epsilon\sigma\theta\alpha\iota$ . All the corslets, however, which receive any specific description in the *Iliad* are probably, and some of them certainly, of metal, and therefore so far as we know, with the possible exception of Agamem-

---

1. If this hypothesis is correct, and also the identification of Agamemnon's shield with the Cretan type, an anachronism is involved; for the Pulesati corslet seems to have disappeared before this shield arose.



non's, of the Ionian type : this may be taken as certain of those which have γύαλα. There is no evidence for the existence of this type earlier than the seventh century,<sup>1</sup> and no one has attempted to put it further back than the eighth.

But this is surely too late a date for the composition of the *Iliad*. We must therefore admit an alteration of the text which, while affecting the narrative only in the most trivial degree, goes somewhat beyond the insertion here and there of an inorganic line.

### ZOSTER AND MITRE

Two perplexing pieces of body armour remain to be dealt with, the ζωστήρ and the μίτρη. The fact that ζώννυσθαι is once (A 15)<sup>2</sup> used as the equivalent of θωρήσσεσθαι and κορύσσεσθαι suggests that at one time the ζωστήρ reckoned as a defence of first-rate importance. This can only have been before the introduction of the θώραξ, and one thinks naturally of the girdles worn by male figures on various works of Minoan art, for example, the Cup-bearer of Knossos and the Chieftain on the steatite vase from Hagia Triada, and also on the gold ring and intaglio of the Shaft-graves. The function of the girdles, which have a prominent ridge at the waist and below it a straight or concave outline, was to support the loin-cloth ; so far as the scanty evidence goes it was not worn by the chiton-clad figures of the mainland, whose tunics are confined at the waist by a narrow strip of stuff or leather.<sup>3</sup> The loin-cloth has left a trace or two in the Homeric poems, and was presumably worn by the original heroes of the earliest arming formula (O 479-83). The zoster would probably not be mentioned in the earliest poems among the articles assumed, because it was always worn, but it lies by the side of the sleeping Nestor, with his shield, two spears, and helmet (K 77). It is worth noting that he does not assume it when he puts on his chiton (131) : there was no formula for a zoster worn in conjunction with a chiton. It is in fact as much a survival in the poems as is the body-shield, having gone out when the chiton came in. It is suitably possessed by Aias (H 305) and given

1. Herod., ii. 152.

2. Also χαλκὸν ζώννυσθαι, ψ 130. Cf. Paus., IX, 17, 3, πλησίον δὲ Ἀμφιτρύωνος δύο ἀγάλματα λίθινα λέγουσιν Ἀθηναῖς ἐπικλησιν ζωστηρίας· λαβεῖν γὰρ τὰ ὄπλα αὐτὸν ἐνταῦθα, ἤλκα Εὐβοεῦσι καὶ Χαλκιδόντι ἐμελλεν ἀντιτάξεσθαι, τὸ δὲ ἐνδύναί τὰ ὄπλα ἐκάλουν ἄρα οἱ παλαιοὶ ζώσασθαι, καὶ δὴ Ὀμηρον Ἄρει τὸν Ἀγαμέμνονα ποιήσαντα εἰκέναι τὴν ζώνην, τῶν ὄπλων τὴν σκεπὴν φασὶν εἰκάζειν, and Ἄρες φωννύσκειτο μίτρη, E 857.

3. *Tirynsis*, II, Pl. XI, 5.

as a gift by him and also by Oineus, a hero of a bygone age. In both these cases it is *φοίνικι φαεινός*, which suggests leather as the material or part of it; Nestor's, however, is *παναίολος*, so is that of Menelaos in *Δ* 186; Agamemnon's, worn in conjunction with a possibly early form of corslet, is of silver, and doubles up the point of a spear (*Δ* 236). In *Μ* 189 and *Ρ* 578, a warrior is disabled or killed by a blow which penetrates the zoster. In *Υ* 414, where the same thing occurs, the curious detail is added that the girdle fastens behind: that of Menelaos (*Δ* 132 ff.) plainly fastens in front. In *Ε* 539 (= *Ρ* 519) and *Ε* 615/6, it covers the *νειαίρη γαστήρ*, which suggests a lower position than the Cretan girdle assumes. In *ξ* 72, the only place where it occurs in the *Odyssey*, the swineherd girds his chiton with it as a preparation for killing a pig. This is probably one of the mock heroic touches in the *Odyssey*.

The noun *μίτρη* occurs only in *Ε* 857, where it is worn by Ares, and in the wounding of Menelaos (*Δ* 187, etc.), where it is definitely stated to be made of metal. An otherwise unknown warrior is described as *αίολομίτρης* (*Ε* 707), and the comrades of Sarpedon are *ἀμιτροχίτωνες*, i.e. wearing their chitons without a mitre, according to the generally accepted explanation<sup>1</sup> (*ΙΙ* 419). It is probably with intention that one of them is described shortly after (465) as receiving a mortal wound *νειαίραν κατὰ γαστέρα*. In *Ε* 857 the mitre covers the *νειάτον κενέωνα*, i.e. exactly the same region as the zoster. The protection of this part was not solved by the Ionian corslet, and no vase-painting has ever been adduced which shows a mitre in conjunction with it, though thigh- and arm-guards (*παραμηρίδια* and *χειρίδια*), which seem to have been tried as experiments, are occasionally shown, e.g. on the Exekias amphora in Rome. There is, however, a series of early metal objects, resembling short aprons, from Olympia, and also occurring, chiefly as miniature votive offerings, in Crete, which have perhaps a better claim than anything else to represent the Homeric mitre.<sup>2</sup> They generally have rings in the upper edge for suspension from a girdle. There is no very precise material for dating these objects, but to judge from the primitive helmets and corslets associated with the miniature specimens, they go back to the seventh century.

Helbig proposed to identify with the mitre a series of metal girdles,

1. The scholia on the word are interesting, but not illuminating.

2. Pl. XLVIII, 6; Furtwängler, *Die Bronzen*, Taf. LX, 985 Textband, IV, p. 158; B.S.A., VIII, Pl. X and p. 258; Poulsen, *Ath. Mitt.*, XXXI.

broad in front and narrowing behind, of the Early Iron Age ; it is, however, almost certain that not one of them is of Aegean provenance.<sup>1</sup> They come almost entirely from North and Central Italy : three are reported from Poland. Adriatic influences are not to be excluded from the Aegean of the Early Iron Age ; but they can be detected chiefly in Crete and Rhodes, stepping-stones on the route to Cyprus, where they are most marked of all. The bronze figurine from Olympia published by Steiner<sup>2</sup> wears a girdle which covers the soft parts, and is perhaps of this type, but it is very slightly indicated, and that of the figure from Delphi to which he refers is too narrow to be of much use as defensive armour.

The word *zoster*, though apparently not of Indo-European origin, established itself in Greek, together with several kindred or derived words. *Μίτρη*, also a loan word, has taken no root in Greek. It reappears in the tragedians in a different sense (head-band), and is confined to poetry. By the Romans it was regarded as definitely associated with Asia Minor. Possibly the word is really a doublet of *zoster*, drawn from another language or dialect ; for the meaning girdle is not incompatible with its later meaning of head-band ; possibly it represents a piece of armour, late and evanescent, which never quite made good its footing in Homer. If it is rightly identified with the bronze aprons of Olympia and Crete, it could not be worn without a girdle, and the two together may have been called indifferently mitre and *zoster* ; this would account for the passages where the *zoster* is said to cover *νεαίραν γαστέρα*, which no ordinary girdle would do. In *Ῥ* 414 the man who is struck from behind on the clasps of the girdle, is struck in the middle of the back, and the spear point comes out *παρ' ὀμφαλόν*. If this *zoster* had a mitre suspended from it in front, it would necessarily fasten either at one side or at the back. The other examples of the *zoster* would suit the old Minoan belt very well, and it is probably to be regarded as an archaism in the Homeric text, apart from its possible use in conjunction with the *μίτρη*. The soldiers of the megaron frieze do not wear it, nor yet those of the Warrior Vase, so far as appears.

The narrative of the wounding of Menelaos has been so badly mangled that it cannot be restored in detail with any confidence : but it is perhaps

---

1. Helbig, pp. 289/90. For the alleged Euboean provenance of one, see Déchelette, *Manuel*, II, 1, p. 434 note 3 ; and cf. MacIver, *Villanovans and Early Etruscans*, Pl. IV.

2. *Ath. Mitt.*, XXXI, pp. 219 ff. and Pl. XVIII.

not fanciful to trace in it a simpler original of very great antiquity. A comparison of  $\Delta$  132-8 with 185-7 and 213-16 makes it clear, firstly, that the corslet is an interpolation, and secondly, that the  $\zeta\omega\mu\alpha$ , which has been ousted from the first passage by the additions, is closely connected with the zoster. It is the loin-cloth, as all the scholia admit in their comments on  $\Psi$  683, where it is assumed by the boxers as by the contestants in the earlier Olympic games.<sup>1</sup> Incidentally, this passage shows that it was not in ordinary wear among the Homeric heroes. Was their wrestling derived from Crete, and did the  $\zeta\omega\mu\alpha$  come with it? The scholia on  $\Delta$  187 make it a metal prolongation of the corslet, but this place is already filled by the mitre, which we have found to be in all probability a post-epic invention. Once corslet and mitre are removed, we have nothing remaining but zoster and zoma, the latter probably implying the absence of the chiton, which is not mentioned. The fact that the blood is seen trickling down the thighs of Menelaos has been used to prove the shortness of the chiton; if this argument is sound, we must apply it to the shins and ankles also, and it follows that in the original there were no greaves. We are left with a Minoan prince, such a figure as the Chieftain, or the combatants of the Battle of the Glen, in loin-cloth, zoster and Cretan boots or rather sandals with the open-work strapping carried a little way above the ankle,<sup>2</sup> whom the Great Goddess saves from death by directing a perhaps Cnossian arrow to the one part of his body which is protected.  $\xi$  482 gives a perfect portrait of a Minoan warrior going out to an ambush, blurred in 499 by the senseless gloss  $\omicron\iota\omicron\chi\iota\tau\omega\nu$ , added by a poet for whom the old tradition was hazy. The word  $\zeta\omega\mu\alpha$  does not occur elsewhere in Homer, but  $\zeta\omega\sigma\tau\rho\alpha$  in  $\zeta$  38, representing the typical male garment as opposed to  $\pi\acute{\epsilon}\pi\lambda\omicron\iota$ , has doubtless the same meaning.

### THE HELMET

Neither the material remains nor the poems afford much evidence for determining the nature of the Homeric helmet. No helmet of the Helladic or Geometric age survives, and the representations in art are for the most part so small as to be useless for investigating details. In the poems the names of the article and its epithets, though numerous, are unenlightening or obscure.

- 
1. The scholia on this passage give anecdotes about its disuse at Olympia.
  2. Cf. *J. H. S.*, 1925, p. 26, fig. 30.



Crete affords a certain amount of material.

The Chieftain Vase<sup>1</sup> is disappointing, for all the figures are bare-headed; as Dr. Hall has pointed out, what the captain wears is merely his long hair coiled up. On the Boxer Vase,<sup>2</sup> however, some of the figures wear a helmet without a crest, and with neck-guard and cheek-pieces, curiously resembling the later Corinthian helmet; whether it was in military or merely gladiatorial use, and what the material was, we cannot say. The Pulesati wear a neck-guard, in conjunction with the felt or leather skull-cap concealed by the feather crown.<sup>3</sup>

A second and certainly military type occurs as part of the design on a vase from Isopata,<sup>4</sup> in conjunction with a figure-of-eight shield. It is conical, formed of a series of horizontal ridges or strips surmounted by a knob, and terminates below in a well-marked rim, attached to which is a neck-guard, and what is perhaps less a cheek-piece than an exaggerated ear-flap. A similar helmet is painted on a stucco altar from Mycenae (*B.S.A.*, XXV, p. 225), and is engraved on a gem from Vaphio (*Eph. Arch.*, 1889, Pl. X, No. 37), and on another from Mycenae, Tomb 518. The same type occurs on the megaron fresco from Mycenae,<sup>5</sup> where it leaves the face completely exposed; the representation is unfortunately so fragmentary that we cannot say whether this example also had a neck-guard. It can be seen with comparative clearness on two of the figures on the signet ring of the Battle in the Glen, fitting round the temples, and consisting of two horizontal ridges surmounted by a cone and a knob to which a plume is attached, and on the figure interpreted as a steersman on the Siege Vase from the Fourth Shaft-grave. A somewhat higher peaked cap or helmet is worn by small bronze figures from Mycenae and Tiryns (Perrot et Chipiez, *Hist. de l'Art*, VI, pp. 757-8; *Eph. Arch.*, 1918, Pl. II). The helmet of the Enkomi griffin-slayer seems to be of the same type, though the top is cut off by the frame of the design. It has no cheek-piece; neither have those of the bronze figurines. The gold intaglio<sup>6</sup> has an example with an extravagant crest in the shape of a ram's horn; a helmet which forms the design of a sard from Vaphio<sup>7</sup> is surmounted by a pair of similar objects. These tiny representations

1. Bossert, p. 62, no. 87.

2. Bossert, p. 64, no. 89, and *P. of M.*, I, p. 690, fig. 511.

3. Cf. Herod., VII, c. 92.

4. Pl. XLIX, 7. Evans, *Tomb of the Double Axes*, p. 27.

5. Rodenwaldt, *Beilage*, III.

7. Reichel, p. 105, fig. 41.

6. Reichel, p. 2, fig. 2.



afford no clue to the material employed, and it is impossible to say whether they are meant to represent the boars'-tusk helmet of similar shape worn by the small ivory heads from a L.H. III grave at Mycenae, from Spata in Attica, and from Enkomi.<sup>1</sup> The well-known description in *K* of a helmet plated with boars' tusks and the presence in a series of Helladic and Minoan tombs of slices of such tusks pierced for attachment to a felt or leather backing afford a satisfactory explanation of the curious headgear of these ivories. It consists of a conical cap formed of horizontal rows of crescent-shaped objects, which face right and left in alternate rows (*ἐνθα καὶ ἐνθα*). The cap reaches only to the temples, but has a neck-guard and broad chin-strap also set with plates. Prepared plates have been found at Mycenae in the Fourth Shaft-grave,<sup>2</sup> and in later chamber-tombs, at Pylos (Kakovatos), at Spata, Menidhi, Dhimini, and Zafer Papoura,<sup>3</sup> and finally at Dendra in a tomb dated by the pottery to about 1300. It would therefore seem that this type belongs to the mainland, since it occurs in Crete once only, and late, and that it was in common use throughout the whole Late Helladic period, despite the fact that it would require a very large number of tusks to produce a single helmet, the number has been calculated at 150. It disappears completely at the end of the Helladic age: no single specimen of prepared tusk has been yielded by any later tomb. This fact is accounted for by the costliness of the object. In the impoverished age which succeeded the fall of the Mycenaean power, no individual was likely to possess the requisite number of animals. The passage in *K* may therefore be confidently taken as a fragment derived from heroic poetry of the Helladic age and embodied in his own work by a poet who cannot have seen the object described.<sup>4</sup>

So far we have had, apart from the Boxer helmet, varieties of a single type only, viz. the conical cap fitting close at the temples: it probably always had a chin-strap like that of the ivory heads, or cheek-pieces or

1. Reichel, p. 103, figs. 38 and 39. *Excavations in Cyprus*, Pl. II, 1340.

2. The quantity found here was very great, including rectangular plates for the chin-strap as well as crescent-shaped for the cap; there was also a round plate with a hole for the insertion of the plume, and a bunch of strips of gold leaf which doubtless served this purpose. (See Reichel, figs. 40 and 42.) From a large number of plates found in a chamber tomb at Mycenae, excavated by the British School, it has been found possible to reconstruct a helmet on the model of the ivories.

3. Evans, *Prehistoric Tombs of Knossos*, p. 67. In Tomb 55, together with a cross-guard rapier, a knife and one spear-head; also a stirrup-vase.

4. Another archaic touch in this book is the zoster with which Nestor was wont to gird himself for war.

ear-flaps like those of the Mycenae fresco to make it sit securely, and it sometimes had a neck-guard.

On the Warrior Vase we find along with the other changes in equipment a new helmet, with a peak like that of a deer-stalker cap in front, and a similar one behind, which does not, however, cover the neck. Above it terminates in a cup-shaped projection in which the plume is inserted; beneath this in front is a pair of horns. It is painted in black silhouette, and covered with white spots, which perhaps represent metal discs attached to a leather background. The helmets of the men on the back of the vase, and apparently of one of the warriors of the stele are different, and not easy to interpret: they seem to be leather caps fitting closely over the forehead but expanding above, and forming a ridge running from the forehead to the back of the head, along which a crest is inserted. Presumably the cap was made of two halves stitched together along the line of the ridge. They also are strengthened with metal, if this interpretation of the white spots be correct, but, to judge by the one complete representation, afford less protection to the head and neck than the deer-stalker type of the other side. The warriors of the vase and stele carry no swords; but it is natural to connect the 'deer-stalker' type with the coming of the heavy slashing sword. As long as swords were light and were used solely or mainly with the point, the head did not require a very massive defence, for the parts principally aimed at would be, as we see from the Shaft-grave intaglio and the descriptions in Homer, the vulnerable spot above the collar-bone or the soft parts of the trunk if exposed by an incautious movement. The Pulesati, with their light slashing swords, were content with their feather crowns and felt or leather caps; the Shardana, for the most part, with a skull-cap surmounted by a pair, or possibly (if we suppose one pair to be masked by the profile position) by two pairs of horns and by a disc or knob on a stalk rising from the top.<sup>1</sup> For this type a chin-strap is indispensable, and is sometimes indicated in the representations. It is worth nothing, however, that the Shardana sometimes felt the need of a better defence. Thus a mercenary of Ramses III, armed with a long broad-sword, wears a helmet which

---

1. Pl. XLIX, fig. 2. Bossert, p. 250, no. 345. The helmeted head in 'Egyptian' porcelain from the Third Shaft-grave (Schuchhardt, p. 208, fig. 198; Reichel, p. 44, fig. 23) can hardly be of Mycenaean manufacture. It may be Cretan, and though it differs in certain points from the Egyptian representations of the Shardana, it may represent the Cretan view of them.

still requires a chin-strap to keep it on, but affords more protection both to head and neck.<sup>1</sup>

Geometric representations of the helmet are almost useless; the commonest type, however, shows no sign of a peak over the forehead. Reichel's figure 51 gives an unusually clear representation, and shows a cap fitting closely over the whole head: figure 52, however, shows something of a peak over the forehead and a new type of crest—a ridge-crest detached from the helmet and mounted on a stalk. Something of the same sort is worn by the guards with tower shields on the Assurbanipal relief, and by the Ionian envoys to Sennacherib, in some cases in combination with the feather crown. Hence the origin of tilting the crest is probably to be found in Asia Minor. Though in archaeology the argument *ex absentia* must always be used with caution, it is to be noted that we have no evidence for the existence of a metal helmet in Greek lands before the seventh century, when amongst other forms<sup>2</sup> the so-called Corinthian helmet makes its appearance as part of the Ionian panoply. This type appears in rudimentary form on a bronze bowl of Amathus,<sup>3</sup> and on the relief from Carchemish quoted above, and as the cheek-pieces are not yet there, though the neck and ears are covered, we cannot regard these as more than the prototypes of the fully developed Greek helmet. Though the accompanying round shields of the Cypriot bowl have patterns, as also have some of the shields on later geometric pottery,<sup>4</sup> these are not individual enough for blazons, for which there was no need, as long as the wearer's face could be seen. Hector on the Euphorbos plate, already quoted as one of the earliest representations with the Ionian panoply, has a typical 'Corinthian' helmet with a nose-guard, and Olympia has furnished actual specimens of primitive appearance.<sup>5</sup> With a helmet which concealed so much of the wearer's face some distinguishing mark was necessary, and Hector's shield bears a flying bird as a blazon. The helmets of Menelaos and Euphorbos have borrowed the cheek-pieces of the 'Cor-

1. Pl. XLIX, 3. W. Wolf, *Bewaffnung des altägyptischen Heeres*, p. 64, figs. 42 and 43, and p. 74. The Shardana bodyguard of Ramses II carry the same type of long sword, simply an enlargement of the ordinary Shardana short sword. It may have been devised to meet the swords of the Northerners, specimens of whose somewhat different swords have been found in the Delta and can be dated to the end of the thirteenth century. (See T. E. Peet, *B.S.A.*, XVIII, p. 282.) A better helmet would follow.

2. *E.g.* the high-crested form found among the miniature votive offerings from Praesos (*B.S.A.*, VIII, Pl. X), and on the bronze figure from Olympia referred to above.

3. Perrot et Chipiez, III, p. 775, fig. 547. Helbig, Taf. 1.

4. *E.g.* Reichel, fig. 52. Perrot et Chipiez, VII, p. 174, fig. 58.

5. Helbig, p. 295, figs. 109-111.

inthian' type, but retain in an exaggerated form the stilted crest which we have found on the Assyrian reliefs and on Dipylon ware, and which survives in the skull-cap with huge stilted crest, often worn by Athena on black-figured vases, a form hardly possible in real life, but reminiscent of the Shardana helmet. The Carians are credited by Herodotus with the invention of shield-blazons, and also with a new method of attaching the crest to the helmet; for him no connection exists between the two innovations. But in fact the 'Corinthian' helmet has a peculiar crest, and that even before it develops its cheek-pieces. If it is possible, as has been suggested by Professor Myres, to take ἐπὶ τὰ κράνεα λόφους ἐπιδέσθαι as meaning 'to attach the crest immediately to the helmet'<sup>1</sup> instead of stilting it, then Herodotus may have in mind the 'Corinthian' helmet, of which we should expect to hear in connection with the introduction of shield blazons, and his statement may refer to the adoption by the Ionians of the 'Ionian' panoply from their Carian neighbours. Hector's helmet may be meant to indicate his Asiatic domicile.

Helbig, relying on the large number of epithets implying the use of metal, took the Homeric helmet to be wholly or at least mainly metallic, and, founding on a few passages where heroes are recognised not by their faces but their equipment, identified it with the Corinthian helmet.

This position was successfully combated by Reichel, who pointed out that a man at a distance will inevitably be recognised by his general appearance rather than by his face. Aias is naturally known by his unique shield (*A* 525/6), Diomedes (*E* 181-2) by the combination of shield, helmet, and horses. Nowhere does a shield blazon appear in Homer, unless we so regard the Gorgoneion of Agamemnon's shield. If the blazon were known to epic, it would be a favourite subject for description as it is in Æschylus, and would inevitably be appealed to when the identity of a hero was in question. The passages concerned with Patroklos prove nothing. It is true that he asks for the armour of Achilles as a disguise (*II* 41), and that when the Myrmidon troops are seen on the move, the Trojans think, as they naturally would, that Achilles has abandoned his wrath (281). They do not take Patroklos for Achilles; Sarpedon (423) says that he will engage him in close combat to find out who he is. The motive of the disguise never reappears, and combatants normally recognise each other (*e.g.* *II* 617 ff.). It is true that such phrases as δεινὸν

---

1. We appear to have an example of the method on the reverse of the Warrior Vase.



δερχόμενοι, Γοργοῦς ὄμματ' ἔχων and πυρὶ δ' ὄσσε δεδήει are not inappropriate to the uncanny gleam of eyes seen through the eye-holes of the 'Corinthian' helmet, but they do not necessarily imply it, and *H* 212, *A* 614 (where ὄμματα must mean face, as perhaps in *Γ* 217) and *O* 607/8 demand an uncovered face.

Helbig is doubtless right in his view that χαλκοπαρήϊος refers to cheek-pieces, and not to the sides of the helmet itself, as Reichel suggests, quoting μιλοπαρήϊος, an epithet of ships, as analogous. It is not impossible that this epithet should have been applied to the cheek-piece helmets of Crete and Mycenae; the example on the megaron frieze has some kind of plating of the cheek-piece, though it is, of course, impossible to specify the material. On the whole, however, it seems more probable that the four passages where the adjective occurs are descriptions of the 'Corinthian' helmet, and therefore in their present form late, like those which describe the Ionian corslet. In two (*M* 183 and *Υ* 397) the helmet is specified as χαλκείη; the third (*P* 294 ff.) is of doubtful interpretation (*v. infra*), the fourth (*ω* 523) is neutral. Only five helmets are described as entirely of metal, viz. the two just cited, στεφάνη χαλκείη (*K* 30), and κυνέη πύγχαλκος (*σ* 378 and *χ* 102); εὔχαλκος, χαλκήρης, χαλκοβάρεια imply metal as an accessory only, however important. The 'Corinthian' helmet is regularly of metal, and epithets appropriate to it would have been more frequent if it were the normal form in epic. Further, most extant specimens have a strong nose-guard; but there are two examples of fatal blows in Homer (*E* 290-1, where Leaf convincingly explains the curious course of the spear, and *N* 615), the latter of which at least should have been turned by such a guard. Similarly, the true Corinthian helmet (*v. Reichel*, fig. 36) would ward off blows on the temple, and on or immediately below the jaw or ear, which are frequent, and are described without any allusion to the helmet, *e.g.* *E* 177 and 671, *Π* 606, *P* 617.

Finally, κράνος, the ordinary prose word for a helmet, does not occur in Homer, indicating that the type with which it was associated was not adopted till the epic tradition was closed or nearly so. We must therefore search for the typical Homeric helmet or helmets in Helladic or sub-Mycenaean material.

As has been said, the material does not lend itself to very definite conclusions. The description ἐπὶ κροτάφοις ἀραρυῖα, however, which occurs twice in the *Iliad* (*N* 188 and *Σ* 611) with κόρυς, and twice in the *Odyssey* (*σ* 378 and *χ* 102) with κυνέη, is especially suitable to a helmet



like that of the griffin-slayer on the mirror-handle, or those of the Battle in the Glen. One of these seems to have cheek-pieces, as does also the helmet with a ram's horn crest on the gold intaglio, and another on a gem found in a chamber tomb at Mycenae excavated by the British School, but they are of the narrow sort seen on the megaron frieze of Mycenae and would conceal very little of the face. One helmet is mentioned as having the chin-strap, which would be indispensable with this type of helmet when it had no cheek-pieces ( $\Gamma$  371-2). The men on the obverse of the Warrior-Vase probably also have chin-straps (Reichel, fig. 37), though concealed for the most part by the beard. The Corinthian helmet had no need of a chin-strap, and on actual specimens there is no means of attaching one. The helmet of Paris in the passage from  $\Gamma$  quoted above is called *τροφάλεια*, a probably archaic name, as will be shown later, and occurring in the archaic surroundings of the duel. The conical helmet, when it has no cheek-pieces, and those on the reverse of the Warrior Vase leave the lower part of the temple exposed, and would allow of the blows described in  $\Delta$  502 and  $E$  584. In  $N$  576 a blow similar to the latter, delivered by a great Thracian sword, cleaves the helmet and knocks it off; this would better suit the helmets on the obverse of the Warrior Vase, whose projecting peak should give some protection to the temples, but might fail to withstand a really heavy blow. The Corinthian helmet fully protects the sides of the face, and could not be knocked off by a blow. Little can be gleaned from the various words used for helmet. *Κυνέη* and *κόρυς* are the most frequently employed, and probably cover several forms. *Κόρυς* is presumably ancient, since it has given rise to *κορύσσεσθαι*; the active *κορύσσειν*, in the sense of 'to cause to arm,' has been replaced by *θωρήσειν* except in  $B$  273. *Κυνέη* is generally taken to be derived from *κύων*, in which case it means 'made of dog-skin,' and is also presumably ancient. Only the *κόρυς* and *κυνέη* are described as *ἐπὶ κροτάφοις ἀραρυῖα*, only the *κόρυς* has *φάλος*, only the *κόρυς* and *κυνέη* are *τετράφαλος*, only the *κυνέη* is *ἀμφίφαλος*.

If the nature of the *φάλος* could be determined, it would give a clue to the type of helmet described by these epithets. The views of the ancient commentators are conflicting and confused but include one<sup>1</sup> which has been held in modern times, viz. that the *φάλος* is the tube into which the crest was inserted or the upright to which it was attached. It

---

1. Schol. A and T on  $N$  132.

has been reasonably objected that it would be strange to describe such a helmet by anything so inconspicuous as the support for the crest rather than by the crest itself ; also, no Homeric helmet has more than one λόφος. This hypothesis may be dismissed, and also that of Helbig, who would see φάλοι in the *repoussé* ridges of a type of helmet<sup>1</sup> found both at Olympia and in Italy, the fossilised representatives of the metal bands which once strengthened a helmet of leather.

On the whole, Reichel's explanation is the most satisfactory—that the φάλοι are horn-like projections, such as are seen on the Warrior Vase helmets on the obverse, and also on the helmets of the Shardana. These are doubtless survivals of the horns of the animal whose scalp was originally used for a helmet. We are reminded of those Thracians who settled in Asia Minor, where they acquired the name of Bithynians, and served in Xerxes' army equipped with small shields of raw ox-hide, a pair of hunting-spears, and helmets ; πρὸς δὲ τοῖς κράνεσι ὧτά τε καὶ κέρα προσῆν βοὸς χάλκεα, ἐπῆσαν δὲ καὶ λόφοι.<sup>2</sup> Horns and ears together would give four φάλοι ; and reference may be made again to the Amazon of the Forman lebes, who has horns and ears on her helmet.<sup>3</sup> The helmet of one of her Greek antagonists has ears, and helmets with ears as well as horns are seen in Etruscan art and occur on the silver situla from Chiusi, which may be Cypriot work or an Etruscan imitation. In either case we have an ultimate connection with Asia Minor. A helmet of this sort might be either ἀμφίφαλος or τετράφαλος ; the latter adjective has in all probability given rise to the noun τρυφάλεια. Such projections would agree with the φάλοι, which touch each other when men in serried ranks move their heads (N 132-3=Π 216-17), and would be apt to catch the blade of a sword when a blow was aimed at the head ; see Γ 362, where the blade shivers on it, τριχθά τε καὶ τετραχθά, and Π 338, where it snaps at the hilt. Δ 459 (=Z 9) does not lend itself to this interpretation, nor does N 614. The last passage does suggest the support of the crest, and it is not impossible that φάλος, which is explained by some of the ancient commentators as ἥλος and is said by Suidas also to have meant ὑπερέχουσα πέτρα ἐν θαλάσσει, was in virtue of a general meaning 'projection' transferred to such a support for the crest as we have seen on the Dipylon

1. Helbig, p. 301, fig. 113.

2. Herod., VII, 76.

3. Cf. also Blinkenberg, *Lindiaika*, II-IV, p. 40, in *K. Danske Videnskabernes Selskab.*, XI, 4 and literature there cited, especially p. 43 ; also *Oest. Jahresh.* and Diodorus, V, 30, 2 (Gauls) and Plut., *Pyrrh.*, XI (goat's horns). The Minoan 'Captain of the Blacks' (*P. of M.*, II, Pl. XIII) wears a cap of goatskin with the horns attached.

or, better still, on the Lindian fragment.<sup>1</sup> In  $\Delta$  459 it is evidently used for a part which protects the forehead, and probably these passages gave rise to the explanation of Schol. A on *K* 258 that it was a projecting plate which screened the eyes from the sun. The true explanation is probably that  $\Delta$  459 is a new formula developed when the epic poets had lost the true meaning of the word and merely associated it with the front of the helmet. Reichel's explanation gives, which no other does, a satisfactory account of *N* 132-3, of the epithets ἀμφίφαλος and τετράφαλος and of τρυφάλεια, and the best available of the obscure epithet αὐλώπις. It can hardly be an accident that this adjective occurs only in conjunction with τρυφάλεια, which unlike κυνέη and κόρυς is a specialised word, and according to the explanation adopted means a helmet of the Warrior Vase type, but with four instead of two projections. Reichel, translating 'stalk-eyed,' refers the epithet to the horns or φάλοι, an explanation doubtless suggested by the scholiast on Oppian, *Halieut.*, I, 256, who says in a somewhat confused note that the term is applied to certain fish, which like crabs and lobsters οὐ βλέπουσιν ἔσω τῶν ὀφρύων, ἀλλὰ τε δὴ μακροὺς ἔχοντες τοὺς ὀφθαλμοὺς ἐκράλλουσιν αὐτοὺς ἔξωθεν. *P* 293-7 is sometimes cited in support of the view that αὐλώπις refers to the opening of the Corinthian helmet. Here Aias drives his spear through the helmet (κυνέη χαλκοπαρήϊος) of his opponent, and the brain issues from the wound παρ' αὐλόν. The proposed translation is not impossible, though the helmet might still be of the Helladic type with cheek-pieces; but the simplest explanation is to take αὐλός as meaning the socket of the spear. The detail would not be meaningless: it would indicate that the spear had been driven home to the socket. Or the use of the term if it is to be applied to the helmet may indicate that the poet was trying to adapt the epithet αὐλώπις to the new type of helmet.

Nothing definite can be gathered about the πήληξ. It is twice equated to the τρυφάλεια (*N* 527-30, *Π* 794-7); it appears twice as worn by heroes who are definitely described as using the body-shield (*O* 645-8; *Π* 104-7, cf. *a* 256); it is repeatedly said to rock or ring about the temples; it alone is said to have φάλαρα (*Π* 106), of which the most probable interpretation is discs of metal,<sup>2</sup> which would suggest that the ground-work was of leather or felt; its standard epithet is φαεινή, implying that metal was prominent in it. Some of the passages cited above, which

1. See preceding note.

2. τετράφαλλος most probably means 'having four such discs.'

speak of the ringing sound with which it falls to the ground, suggest that it could be entirely of metal. There was doubtless much variety of head-gear in the earlier period, as there was in the seventh century until the two forms known as Corinthian and Attic gradually ousted all others. Still more elusive is *στεφάνη*, the only remaining form of Homeric helmet. Evidently the rim was its most important feature and the epithets *εὔχαλκος* and *χαλκοβάρεια* suggest a leather cap with a metal rim, such as Athena sometimes wears on b.f. vases, with the addition of a tall stilted crest. Once it is called *χαλκείη*, implying that the form also existed in metal.

On the whole, therefore, we find that the Homeric helmet preserves a distinct Helladic tradition. The face is assumed to be visible. The account of the boar's tusk helmet of *K* is, with the possible exception of that of Nestor's cup, the most precise description of a 'Mycenaean' object which the poems afford. The description *ἐπὶ κροτάφοις ἀραρνῖα* is appropriate to the conical Shaft-grave type: epithets involving *φάλοι* seem best ascribed to the type of the obverse of the Warrior Vase. Only the rare epithets implying a helmet entirely of metal need be referred to the helmet of the Ionian panoply.

This panoply is little more than the translation of the Warrior Vase equipment into metal: so far as we are aware the only fundamental change which occurred in the interval was the introduction of iron for weapons of offence. The heavy slashing sword of bronze had reached Egypt by about 1200 B.C.<sup>1</sup>; presumably the specimens found in Greece and Crete belong to approximately the same period. It would seem therefore that a ninth-century Homer could describe the fighting before Troy in terms applicable to that of his own day without introducing innovations into the heroic tradition. The appearance of the panoply made Homeric fighting seem old-fashioned, and one form of the inevitable corruption of the text by rhapsodes was the introduction of bronze corslets and helmets. That the poems so successfully resisted the substitution of *σίδηρος* for *χαλκός* may be due in part to the fact that the words are not metrically equivalent; still in three narrative passages (*Δ* 123, *E* 34 and *Ψ* 30) the word is used generically as *χαλκός* is elsewhere—passages therefore quite as anachronistic as the famous *αὐτὸς γὰρ ἐφέλκεται ἄνδρα σίδηρος*, or the simile about tempering iron from the *Odyssey*.

---

1. *B.S.A.*, XVIII, pp. 282 ff.



## WOMEN'S DRESS

In another matter—that of women's dress—Homer seems to have described the fashions of his own day, or at least to be unaffected by Mycenaean tradition. The frescoes of Thebes and Tiryns exhibit the great lady of the L.H. III period still wearing the gorgeous and elaborate Minoan costume. The Warrior Vase shows a change; though the painting of the lady on the obverse is too summary to admit of interpretation in detail, her dress undoubtedly has long tight sleeves, and so has that of a Mycenaean 'idol' holding a child.<sup>1</sup> This feature is not Homeric; and no very convincing parallel has hitherto been forthcoming for the dresses of Athena, Hera and Penelope (*E* 733-5, *Ξ* 178-80, and *σ* 291-3). A comparison of these passages makes it clear that the essential garment was a 'one-piece' dress which could be got rid of by a single action, apparently by pushing it off the shoulders like an old-fashioned nightgown. The passage in *Ξ* shows that like the nightgown it opened down the front, and comparison with *σ* 291-3 that, whatever *éveraí* may be, the opening was sometimes closed by fibulae. The gown is the short-sleeved oriental chiton reaching to the ankles, familiar from Assyrian monuments, and the fibula is illustrated on a sepulchral relief from Sinjerli, representing a queen seated on a throne.<sup>2</sup> The fibula, which is of a regular Asia Minor type, appears to be placed over the left breast, but it is possible that according to a familiar convention it is thought of as being in the centre.

On a series of Clazomenian vases<sup>3</sup> decorated with a row of women holding each other by the wrist, an opening down the front of the chitons is indicated, though the fastenings are not shown; but the large number of small fibulae found in the deposit of the oldest temple at Ephesus, whose date is not later than 700 B.C., proves that the object was in familiar use in Ionia. In the archaic tombs of the del Fusco cemetery<sup>4</sup> at Syracuse, considerable numbers of fibulae variously disposed were often found in connection with a single skeleton. Sometimes one or more were found high up on the chest or just under the chin; see tombs CLVIII, CCV, CCCVIII,

1. *Eph. Arch.*, 1888, Pl. IX, 16. Perrot et Chipiez, VI, p. 745, fig. 338. There can be no doubt in this case, and the common type of idol with raised arms (see e.g. Schuchhardt, p. 128, fig. 127) appears to be sleeved also.

2. Pl. XLIX, 9. *Ausgrabungen in Sindscherli*, Pl. LIV.

3. Pl. XLIX, 8. *Tanis*, II, Pl. 29. Watzinger, *Griechische Vasen in Tübingen*, Pl. II.

4. Described by Orsi in *Not. delgi scavi*, 1893 and 1895.

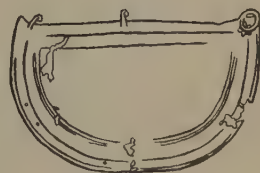




3



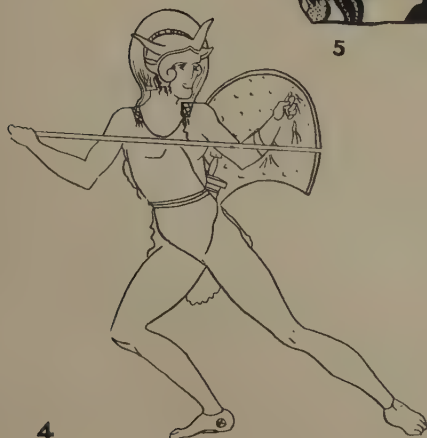
2



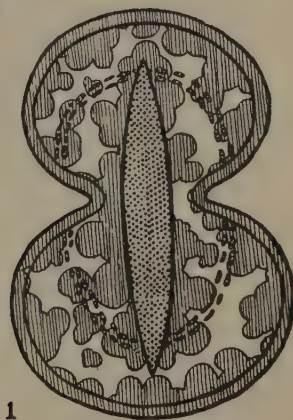
6



5



4



1

ILLUSTRATING "DEFENSIVE ARMOUR IN HOMER."



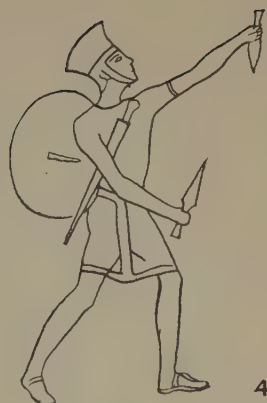


2



3

7



4



1



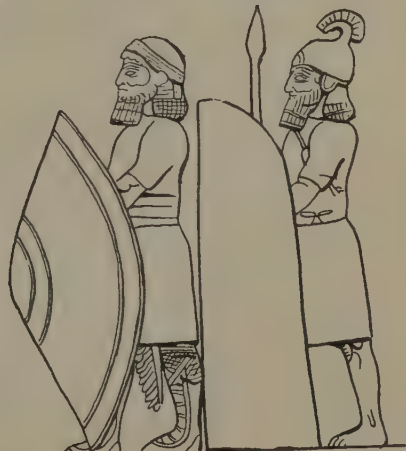
5



8



9



6

ILLUSTRATING "DEFENSIVE ARMOUR IN HOMER."





1



2

SHIELDS FROM THE IDAEAN CAVE, CRETE.





CCCXXVI. In tomb CDXXVIII 25 fibulae were found, apparently all worn simultaneously; some of them had apparently been used to fasten down the front a dress open from top to bottom. This exceptional arrangement Orsi is inclined to ascribe to Etruscan influence; and at Corneto a row of fibulae fastening into bronze rings and so playing the part of hooks and eyes was found on the breast of a skeleton. Etruria brings us back to Asia Minor.

No one nowadays proposes to date 'books' of Homer by the objects described in them any more than by the linguistic forms which they contain. The Mycenaean palace of Odysseus and others on the same plan pervade the entire *Odyssey*; in the *Iliad*, *K* combines the account of the boar's tusk helmet, with such a *pastiche* of heroic simplicity as the offer of a ewe and her lamb as a prize for a deed of exceptional daring. There are no archaeological strata in Homer; there is the use by a great poet of a poetic tradition reaching back many generations, which had dropped much and added much, but had preserved certain traits of an extremely remote past. Later alterations, whether due to the casual modernising of the rhapsodes or 'tendencious' interpolation by an Athenian Committee may here and there blur the outlines of the heroic age; so far as we can tell, they have not affected the structure of the epic or the course of the narrative.

## REVIEWS

*Alt-Ithaka: Ein Beitrag zur Homer-Frage. Studien und Ausgrabungen auf der Insel Leukas-Ithaka.* Von WILHELM DÖRPFELD. Unter Mitarbeit von PETER GOESSLER, ERNST VAN HILLE, WILFRIED VON SEIDLITZ, RICHARD UHDE. Two volumes. Richard Uhde, München-Gräfelfing, 1927.

Faith, imagination, and intuition, these are gifts which in the excavator, if rightly used, raise competence to genius. And archaeology's debt to them is great, from the days when the glories of Mycenae were first revealed by the faith of Schliemann at which men laughed.

Here in this volume of *Alt-Ithaka*, now handsomely produced with a wealth of illustrations and maps, is a monument to another man's faith, Wilhelm Dörpfeld's faith in his own view of the *Odyssey*, a faith sublime in its survival of many cruel testings, to which faith we owe his long years of work in Leucas, the results of which cannot fail to have a very definite value to the student of prehistoric Greece. That is the value of the book, and it is a great value.

As for the problem that the excavator set out to solve, which island was Homer's Ithaca, we question whether the solution is to be found in these pages. It would seem rather that clear proof of Dr. Dörpfeld's thesis will not be forthcoming. For the plain fact is that in the island which he believes to be Homer's Ithaca Dr. Dörpfeld did not find, or at least has not illustrated, anything that can be accepted as belonging approximately to the Homeric age. He is, we believe, unorthodox in postulating a northern origin for Early Helladic pottery, as illustrated, for instance, in *Beilage* 65, and his theory that this ware remained that of the Achaeans in the remote backwater of Ithaca down to the days of Odysseus is not likely to win many adherents.

Perhaps we may be pardoned if we suggest that the importance of this Homeric problem has been somewhat exaggerated. To the archaeologist, indeed, if it could be proved that the geography of the *Odyssey* is actual and correct, the poem might gain in value as reaching more nearly the status of an historical document. But we may doubt whether any one else would find that Homer's story had gained in charm. Yet to the fascination of this problem we owe a debt of gratitude, for it is to it that is due this careful record of the remains that existed in this north-west corner of the prehistoric world of Greece—a record which is likely to be of very great value in the elucidation of all the obscurities that still hang over it.

J. P. DROOP.

*Variations in the Form of the Jaws.* By SIM WALLACE.  
Bailliere, Tindall & Cox, London 1927.

The Dental Profession should be deeply indebted to Mr. Sim Wallace for this valuable volume dealing with the growth and variations in the form of the jaws. Much of the research work done by Professor Brash in this direction has been incorporated in its pages, and although it does not primarily profess to be a work on Orthodontia, yet until we study the subject from this point of view we shall continue to be faced with failures and relapsed cases after treatment because we are more or less working in the dark, and do not understand the fundamental causes of the aberrations from the normal. One cannot lay too much stress on this important phase of the subject.

Many books have been written on Orthodontia dealing chiefly with the mechanical and surgical side, and I feel sure that until dentists are willing to record their failures as well as their successful cases we shall not make much progress in this branch of dentistry.

The early chapters of the book dealing with the effects of the size and muscular action of the tongue on the growth of the jaws and especially on the alveolar portion are very important and instructive. The overlooking of this fact is a common cause of failure in the treatment of many cases of malocclusion.

What Mr. Sim Wallace refers to in Chapter X as a 'Crowding forward' of the first permanent molar, I consider a perfectly normal development, but what causes the pressure on this tooth from behind is difficult to understand. The pressure is exerted forward from the molar to the bicuspid, canines and laterals, and if a corresponding pressure is not exerted on the centrals to overcome that of the muscles of the lips they remain in retrusion and we get what Angle calls a case of Class II, Division II of Malocclusion. I believe these cases are not connected in any way with mouth breathing due to adenoids as Angle suggests.

Mr. Sim Wallace is to be congratulated on the illustration of the beautiful models showing the development of his son's jaws and teeth between the ages of three and a half and twenty-four years of age. If a large number of these study cases were undertaken in this way and recorded they would be of incalculable value, and add to our knowledge of the subject. Unfortunately the investigations would necessarily have to be spread over a whole generation, but even this should not deter others from undertaking the work.

In Chapter XIV dealing with mouth breathing the arguments against muscular action causing deformation of the jaws are very inconclusive and unsatisfactory, but here again as in former chapters the author brings new thoughts to bear on the subject which may lead others to come to some definite conclusions on this most contentious and increasingly common cause of Malocclusion.

The author's idea that the teeth may eventually decrease in size and so re-establish normal occlusion, seems to me somewhat far-fetched and fantastical. One cannot conceive that decrease in the size of the teeth would occur without a corresponding decrease in the size of the jaws.

The last chapter dealing with Etiological Malocclusion is a very poor attempt at a new classification, based as it is on a few somewhat rare abnormal variations, such as 'missing teeth,' 'local displacements,' etc. Surely one must have a more solid foundation than this upon which to build up so important a subject. It is a very poor finish to an otherwise well-written and well-thought-out book, which detracts somewhat from its value from an Orthodontic point of view.

E. H. MOUNTFORD.

*The Civilization of Greece in the Bronze Age* (the Rhind Lectures, 1923).

By H. R. HALL, M.A., D.Litt., F.B.A. With 370 illustrations and 2 maps, pp. xxxii+302. London, Methuen & Co. Ltd., 1928.

A new member of the Hellenic Travellers' Club, with his face set to the East for the first time, could hardly find better help to an understanding appreciation of the fare before him than Dr. Hall's *Civilization of Greece in the Bronze Age*.

Dr. Hall apologises for the number of his illustrations, yet mainly for form's sake, for he knows that in matters archaeological the clearest of descriptions is little without a picture. He and his publishers are to be congratulated on their achievement in producing a book at a price comparatively reasonable, containing almost four hundred figures, very few of which are too small in scale. In fact it is only in the landscapes and views of sites that an increase in size would seem to have been desirable.

Dr. Hall's text naturally leaves little for a critic to seize on. It might indeed be thought that the reader, if he does not notice Fig. 84, will get the impression that the Minoan potter did not turn at all to the definite imitation of natural forms until the M.M. III-L.M. I transitional period, though the few M.M. II vases from the Kamarais cave produced three marine subjects besides the crocus vase.

It may be felt, too, that, though Dr. Hall does not do more than hint to which side his judgment inclines in the controversy over the date of the Atreus tholos, his mention of the sherd under the threshold is unfortunate, as implying that the proposed late date is based solely on that one notorious piece of evidence, whereas, if recollection serves, it is supported by the presence of other sherds under the stones of the undisturbed dromos wall.

But it is to his last chapter dealing with the transition to the Age of Iron that Dr. Hall will probably find most criticism directed, since it is manifestly impossible to write a chapter on that dark age that will not be open to criticism. The problems are too many. Not the least intriguing is the question, when did the Greek first come to Greece, or where



among the archaeological remains can we first pick up his traces? Dr. Hall's view is that the Minoans and Mycenaeans were not Greek speaking, though the latter may have had a slight admixture of Greek blood, and that the poems of Homer, though written in Greek and about Greeks, have in the main the setting of the great age preceding their arrival, and have incorporated its legends. So far most, though not indeed all, will follow him. It is his choice of archaeological remains to be assigned to Homer's Achaeans that seems open to challenge. For the advent of the Greek can only be fixed satisfactorily at a point where the archaeological evidence points to a racial break. It is indeed possible that the influx of Minoan pottery indicates such a break in Middle Helladic times. That for most people will be too early. After that there is no sufficient break till the influx of 'Geometric.' Yet Dr. Hall fixes on the latest stage of the Mycenaean, the so-called 'sub-Mycenaean,' as the archaeological remains of the Achaeans. Possibly as an unconscious defence against the objection here put forward he states that 'the transition from sub-Mycenaean to proto-Geometric pottery was a gradual, not a catastrophic change.' This in our view while true of the distant islands of Rhodes and Crete, whither the Geometric influence never reached in its fulness, is not true of the mainland. There there is a definite line, and the 'Warrior' Vase which Dr. Hall says 'is no doubt one of the best examples of Achaean ceramic,' is from its fabric undeniably on the Mycenaean side of that line. It may be that the Warriors wear what of all representations of military gear comes nearest to the equipment of the Homeric hero. But it is possible that that equipment is archaic, part of the earlier setting.

The great objection of course to assuming, as we would wish, that the Achaeans were the first of the hordes of incomers who brought the 'Geometric' pottery is that those peoples undoubtedly used iron weapons, whereas in Homer bronze is the constant epithet for weapons. On the other hand, Homer's heroes burnt their dead like the people who brought the Geometric pottery, whereas cremation is not ordinarily associated with sub-Mycenaean remains.

Homer may certainly be called a nuisance to archaeologists, but it seems easier to think that bronze was a poetical epithet, crystallised by long use and its retention helped by its greater metrical suitability, than that the Greek brought with him no well-marked change of culture and suddenly took to burning his dead for no assignable cause. Moreover there is some archaeological evidence for the belief that the bringers of 'Geometric' came in waves, and the very name 'Return of the Heraclidae' applied to the Dorian invasion implies a belief that the Dorians or their near kin had been in Greece before. On this view it is not necessary to think that the Dorians ever were in Athens, at any rate not to the extent that the Dipylon vases would argue, if they are held to be wholly Dorian.

J. P. DROOP.

## INDEX

- 'Abdallah—69.  
 Abednego—73.  
 Abeshek—83.  
 Abd el-Gâdir—63, 65, 67, 70, 80, 88.  
 Abusir—64, 65.  
 Achaeans—93.  
 Achilles—97, 99, 102, 105, 111.  
 Adendân—80, 88.  
 Æschylus—122.  
 Agamemnon—96, 97, 100, 102.  
 Agricola—36.  
 Aias—98, 100, 105, 111, 114, 126.  
 Ajax—97.  
 Albanus—30.  
 Alexandria—45.  
 Alexandrine Library—41.  
 Amathus—121.  
 Amazon—93.  
 Ameipsias—42.  
 Ami—68.  
 Ammonius—45.  
 Anchorite's Grotto—78, 88.  
 Antigoneia—45.  
 Antiochus—42.  
 Antoninus Pius—6, 24.  
 Aolo—68.  
 Apameia—45.  
 Apollonius—41, 44, 46.  
 Apollonius Rhodius—43.  
 Arcadians—105.  
 Archangel Michael—73.  
 Archangel Raphael—74.  
 Ares—115.  
 Aristarchus—41, 42, 43, 44.  
 Aristomenes—102.  
 Aristonymus—42.  
 Aristophanes—41, 42, 43, 44, 45.  
 Asclepiades—45.  
 Asclepiades of Phlius—46.  
 Asia Minor—93, 94, 95, 103, 104, 106,  
     116, 121, 125, 129.  
 Asfalt—83.  
 Aspelt—83.  
 Assurbanipal—105.  
 Asteropaïos—111, 113.  
 Athena—127, 128.  
 Athenæus—42, 46.  
 Athene—97.  
 Attalus—45.  
 Attica—104, 119.  
 Barkal—83.  
 Battle of the Glen—94, 117.  
 Belgic Ware—26, 28.  
 Bithynians—125.  
 Blemmyes—85.  
 Boeotia—92, 104.  
 Boghaz Keui—101.  
 Boxer Vase—118.  
 Buhen—63.  
 Byzantium—41, 43.  
 Christ and Apostles—80.  
 Christian remains—88.  
 Citadel Church—79.  
 Cnossos—103, 114.  
 Cobnertus—35.  
 Contra-Napata—83.  
 Crete—92, 115, 116, 119, 123, 127.  
 Cush—82.  
 Cydas—44.  
 Cyprus—42, 43, 101, 113, 116.  
 Caerleon—4.  
 Callimachus—41.  
 Carchemish—63, 98, 102, 103, 109, 121.  
 Carians—104, 105, 122.  
 Castle Field—47.  
 Central Church—179.  
 Children in the Furnace—81.  
 Christ—69, 70, 72, 75, 81, 82.  
 Deanery Field—3, 4, 14.  
 Debêreh—80.  
 Dendra—102, 119.  
 Deva—14.  
 Dhimini—119.  
 Didron—79.  
 Diomede—111, 113, 122.  
 Dionysius Thrax—46.  
 Dodecaschoenus—84.  
 Domitian—10, 11, 14, 26, 27.  
 Dongola—71.  
 Duris—91.  
 Early Iron Age—116.  
 East Gaulish potters—39.  
 East Wall—14.  
 Egypt—42, 70, 79, 94, 102, 108, 127.  
 Egyptians—110.  
 Enkomi—94, 95, 97, 110, 113, 119.  
 Ephesus—128.  
 Ephorus—45.  
 Epimachus—80.  
 Epiphanes—42, 44.  
 Eratosthenes—41, 44.  
 Ethiopian cemetery—84.

- Etruria—129.  
 Energetes—42; II. 43.  
 Eumenes—42, 43, 45.  
 Euphorbos—106, 109, 121.  
 Exekias—105, 115.  
  
 Faras—74, 78, 79, 80, 82, 83, 85, 87, 88.  
 Ferrég—67.  
 Flavian Occupation—13.  
 Flavian pottery—7.  
  
 Gebel Adda—67, 80.  
 Geometric Vases—109.  
 Germanus—26.  
 Gorgoneion—101.  
 Great Goddess—117.  
 Greece—94, 109.  
 Grotto of Setau—83.  
  
 Hagia Triada—92, 114.  
 Halfa—63.  
 Harvester Vase—109.  
 Hathor Temple—83.  
 Hector—95, 99, 106, 121.  
 Hephaistos—99.  
 Hera—128.  
 Herakleidae—95.  
 Herodotus—106, 122.  
 Hittites—94.  
 Holy Family—75.  
 Homer—89, 99, 100, 107, 110, 113, 117,  
 120, 122, 123, 127, 128, 129.  
  
 Iliad—96, 103, 106.  
 Ionia—106.  
 Ionians—105.  
 Iphidamas—113.  
 Isis—12.  
 Isocrates—45.  
 Isopata—118.  
  
 Jerusalem—80.  
 Jesus Christ—71, 73.  
 Jesus the Christ—74.  
 Joseph—76, 82.  
  
 Kalabsha—73.  
 Kerma—82.  
 King of Cyrene—42.  
 King of Pergamum—42.  
 King Solomon—70.  
 Kuyunjik—106.  
  
 Lake Van—104, 106.  
 Lambacsis—4.  
 Lancaster, Excavations—33.  
 Lebadeia—102.  
 Libyan Period—83.  
 Lion Hunt Dagger—89, 91, 99.  
 Lower Nubia—78, 84.  
 Lycia—103, 104, 108.  
  
 Madonna—76.  
  
 Magi and Shepherds—68.  
 Makuria—78.  
 Marawi—83.  
 Medinet Habu—95, 108, 109.  
 Mediterranean—94, 95.  
 Meja—82.  
 Memphis—42.  
 Menelaos—106, 111, 113, 115, 116, 117,  
 121.  
 Menidhi—119.  
 Mercurius—73, 80, 81.  
 Meroë—87.  
 Meroitic Kingdom—84.  
 Meroitic remains—83, 86.  
 Merowe—83.  
 Meshach—73.  
 Michael—70, 74.  
 Minoan Art—90.  
 Mitre—114.  
 Mnesterophonia—96.  
 Moslems—67, 73.  
 Motans—30.  
 Mycenae—89, 93, 94, 96, 101, 109, 118,  
 119, 124.  
 Mycenaean Age—90.  
 Myrleia—45.  
  
 Nabindiffi Church—87.  
 Napata—83, 87.  
 Nero—7.  
 Nerva—8.  
 Nestor—114, 115.  
 New South Church—79.  
 Niger—30.  
 Nikaia—45.  
 Nobadia—70, 71, 78, 81.  
 North Wall—14.  
 Novaesium—4.  
 Nubia—63, 65, 70, 79, 82, 83, 84, 87, 88.  
 Nubian Churches—80.  
 Nubians—85.  
  
 'Obeidallah—69.  
 Odysseus—96, 129.  
 Oineus—115.  
 Olympia—98, 115, 121, 125.  
 'Omar al Hâq—69.  
 Oxyrhynchus—41.  
  
 Pakhoras—71.  
 Palace at Tiryns—91.  
 Paris—97, 124.  
 Patroklos—96, 97, 122.  
 Pausanias—102, 105, 112.  
 Peleus—99.  
 Peloponnese—91.  
 Penelope—128.  
 Pergamum—43.  
 Phaistos—103.  
 Philadelphus—42.  
 Philistines—94.  
 Philometor—42, 43.  
 Philopator—42.

- Philopoemen—105.  
 Phoenician bowls—101.  
 Piankhy—83.  
 Pius—38.  
 Poland—116.  
 Pompey—45, 46.  
 Promathidas—46.  
 Psammetichus—106.  
 Ptolemies—84.  
 Ptolemy—42.  
 Ptolemy Euergetes I—45.  
 Ptolemy Eupator—42.  
 Pulesati—94, 95, 103, 104, 108, 109, 112,  
 113, 118, 120.  
 Pylos—119.  
  
 Ramesses II—83, 94.  
 Ramses III—108, 120.  
 Raphael—74, 81.  
 Rhodes—116.  
 Rhodian Apollonius—45.  
 Rivergate Church—71, 74, 78, 80.  
 Roman mortuary—38.  
 Romano-British sites—28.  
 Roman potsherds—37.  
 Romans—116.  
 Rome—42, 45, 105, 115.  
  
 Saint Mercurius—81.  
 Salamis—105.  
 Sâlih—69.  
 Sallust—33, 35.  
 Samian Bowl—10.  
 Samothrace—41.  
 Sanam—83, 84, 87.  
 Sardis—103.  
 Sarpedon—115, 122.  
 Second Cataract—88.  
 Sehtep-entêr—83.  
 Semites—110.  
 Sennacherib—105, 121.  
 Serapis—12.  
 Serra—83.  
 Serre—88.  
 Serrenkisse—79.  
 Shadrach—73.  
 Shaft-graves—92, 95, 102, 114.  
 Shardana—94, 95, 101, 103, 104, 108,  
 120, 122.  
 Sheikh Jebel—82, 88.  
 Shepherds—75.  
 Shepherds and Joseph—68.  
 Shiekh Abdallah Gadi—64.  
 Siege of Troy—91, 93, 110.  
  
 Siege Vase—118.  
 Sinjerli—128.  
 Snake Shield—101.  
 Spain—45.  
 Sparta—105.  
 Spartans—106.  
 Spata—119.  
 St. George—79, 82.  
 St. John the Baptist—77.  
 St. Mercurius—79.  
 St. Raphael—79.  
 Strabo—45.  
 Suidas—43, 44, 46, 106.  
 Syracuse—128.  
 Syria—109.  
  
 Teucer—96, 110.  
 Thebes—128.  
 Theopompus—45.  
 Thetis—99.  
 Thomas the Apostle—72.  
 Thrace—93.  
 Thutmose III—83.  
 Tiryns—94, 97, 104, 118, 128.  
 Trajan—30.  
 Trinity—71.  
 Trojans—122.  
 Trojan War—93.  
 Trophonios—102.  
 Tutankhamun—83, 85.  
 Twentieth Legion—15.  
 Tydeus—99.  
 Tyrtæus—106.  
  
 Vaphio—118.  
 Vespasian—6, 7, 9, 11, 26, 28.  
 Vicarage Field—36.  
 Virgin, The—76.  
 Virgin in the Stable—82.  
  
 Wādî es-Sebū'—67, 80.  
 Warrior Stele—93.  
 Warrior Vase—93, 99, 104, 124.  
 Wawat—82.  
 'Wery' Wall, The—33, 36.  
 West Derby—47-55.  
 Western Palace—87.  
  
 Xenophon—45.  
 Xerxes—125.  
  
 Zafer Papoura—119.  
 Zenodotos—97.















